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ABSTRACT

A study was conducted to determine criteria for use in evaluating Indiana local school districts' delivery of programs and services in vocational and technical education and steps for the use of these criteria. Data were gathered by a review of the literature from 1983-1989 and telephone interviews with state agency personnel, concentrating on sets of criteria and their organizers and characteristics that are being used by states that have gained national recognition, that have been recommended by recognized experts in the field, and that are required by federal legislation. Six states were chosen for study: Colorado, Florida, Georgia, Illinois, North Carolina, and Wisconsin. Findings indicate that the major issue facing state-level decision makers is the lack of agreement on a clear definition of what vocational education should be. There is also evidence that policy-makers, advisory groups, and researchers consider effective evaluation to be a top priority for vocational education research and development activities. In addition, grassroots efforts are underway to find ways to assist practitioners in using criterion-referenced occupational tests for the measurement of student progress, with those criteria being directly linked to analyses of on-the-job tasks. Additional trends include the evaluation of student progress on both broad transferable skills and task specific skills, the use of individualized educational plans, and locally directed evaluation. (The four tables in this report show the results of an analysis of these findings. They display the characteristics of state evaluation systems, the categories of state criteria, 28 recommended sets of criteria, and recommended steps for criteria use. Seven appendices include a 133-item bibliography; a list of 105 selected references; a list of 18 resources persons with addresses; consultant vitae; project personnel, activities, and timeline; work session materials packet; and recommended program criteria. A supplemental report includes recommendations for the evaluation of vocational and technical education for higher education and employment and training programs.) (KC)

IN89RE01

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RESEARCH REPORT NO. 2
(FINAL REPORT)

EVALUATION CRITERIA RECOMMENDED FOR THE ASSESSMENT OF SECONDARY VOCATIONAL AND TECHNICAL EDUCATION PROGRAMS AND SERVICES

RESEARCH REPORT NO. 2a
(SUPPLEMENTARY REPORT)

Report Author: Mary E. Gourley

Presented to:
Phi Delta Kappa International

by

The Evaluation Center
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Kalamazoo, Michigan 49008-5178

Daniel L. Stufflebeam, Director
April 1989

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EXECUTIVE SUMMARY

Vocational education as the development of an individual's specific occupational skills, came into legal existence in the United States in 1917 with the enactment of the Smith-Hughes Act. The rationale justifying funding by the federal government was the expected benefits to society and to the individual citizen deriving from these programs. Since then accountability has continued to be an issue in order that states could demonstrate that such benefits did in fact occur.

The enactment of the Education Amendments of 1976 (to the VEA of 1963) by the U.S. Congress resulted in an accountability system known as VEDS, a vocational education data reporting and accounting system. The impetus for this kind of system was agreement that a lack of adequate and comparable data across states made decision making at the federal level an impossible task. As of 1976 there were standardized outcome measures in place. These were primarily economic and labor market outcomes. A shift occurred in 1984 with the enactment of the Carl D. Perkins Vocational Education Act, which added a requirement for educational outcome data to be reported, in terms of general occupational skills and academic foundations.

As of this date, there is agreement in the literature that very few states have explicit published criteria for the evaluation of vocational education programs; that the mode historically has been the reporting of outcomes in compliance with federal legislation; and that there is a high level of disagreement about what is to be evaluated, what framework or model for evaluation is to be used and which level, State or local, has responsibility for carrying out evaluation activities. In addition, there is agreement that the changing priorities of federal leadership have led to a proliferation of definitions, program focus and populations to be served.

In summary, throughout its history vocational education in the United States has been pulled in multiple directions regarding its purpose, its population and its locus of control. The impact of funding levels, the reported influence of special interest groups on federal legislation, the "culture" of vocational

educators which makes them most comfortable with process evaluations, and a more recent change in the role and focus of vocational education researchers to that of vocational education evaluators have all been cited as critical forces in determining what kinds of evaluation have been carried out by the States and as a result, what programs have been established.

In conclusion, findings from this study indicate that the major issue facing state level decision makers is the lack of agreement on a clear definition of what vocational education should be. There is also evidence that policy makers, advisory groups and researchers consider effective evaluation to be a top priority for vocational education research and development activities. In addition, there are grass roots efforts currently underway in the states to find ways to assist practitioners in using criterion-referenced occupational tests for the measurement of student progress, with those criteria being directly linked to analyses of on-the-job tasks.

Additional trends in the revision efforts of states were also identified. Primary among these were: the evaluation of student progress on both broad transferable skills and task specific occupational skills; the use of individualized educational plans; locally directed evaluation activities; procedures for monitoring and validating local evaluations; provisions for technical assistance; and the recognition of a broadening population base for vocational/technical programs.

The results of a review, analysis and interpretation of these findings are shown in the four tables contained in this report. They display the characteristics of state evaluation systems, the categories of state criteria for vocational education evaluation, recommended sets of criteria for a state to use and recommended steps for criteria utilization.

The recommendation section of this report presents the criteria, describes how and why they were selected, and makes recommendations for their use.

INTRODUCTION

Purpose of the Study

The purpose of this study is to provide Phi Delta Kappa International (PDK) with a series of recommendations. Recommendations will include organized evaluation criteria for use in evaluating local school districts' delivery of programs and services in vocational and technical education, and steps for the utilization of those criteria.

Recommendations contained in this report will be used by PDK and incorporated in whole or in part into a study they are conducting which will be presented to the Indiana Commission on Vocational and Technical Education.

The purpose of the PDK study is to make recommendations which are designed to assist the Commission in carrying out their responsibilities in accordance with state legislation (P.L. 217, Acts of 1987, State of Indiana).

In **Education and Jobs for Indiana's Future,** a document designed to guide the development of a long range plan for Indiana, the Commission identified twelve priority areas for the collection of data, analysis and possible policy consideration. One of the twelve was evaluation and accountability. Strategies identified by the Commission for addressing this priority area included the establishment of "approved criteria for the evaluation of vocational education programs, services, activities and special projects" based on a research study of evaluation (Education and Jobs, 1988). Phi Delta Kappa is assisting the Commission in carrying out that research study.

Audiences

The PDK study is necessarily broader in scope and is designed for the following audiences: the Indiana Commission on vocational and technical education, the Commission on Higher Education, the Department of Education and the Indiana Department of Employment and Training. Their recommendations will include criteria for a coordinated system covering all levels: local, agency and statewide.

The audience for the study reported herein is Phi Delta Kappa International.

Limitations

This study is limited to a review and analysis of 1) secondary vocational education evaluation criteria and 2) steps taken by states in adopting and using evaluation criteria. Models of systems and criteria for post-secondary programs or other programs and services supported by state agencies are not included in the analysis, except for the Wisconsin post-secondary model as designated by the RFP.

The information on extant state systems which was collected and reviewed represents systems and criteria currently in use in a small percentage of states. The selection of state vocational education evaluation systems to be analyzed and synthesized was determined initially by agencies and personnel from the State of Indiana and were specified in the RFP from Phi Delta Kappa as: Colorado, Florida, Georgia, Illinois, North Carolina, and Wisconsin. Identification of these states as having nationally recognized programs was corroborated through phone interviews with selected authorities in the field of vocational education.

Reviews of systems and criteria from states other than those listed above were limited by the accessibility of reports and documents. Those which were found through searches of data bases and material collections described later in this report are included in Appendix A. Where characteristics, organization of criteria or procedural details were judged to be useful to this study they were considered in the analysis and are listed in Appendix B.

Previously developed compilations and reviews were found through a search of the literature and are also listed in Appendix A. In all cases they were completed prior to enactment of the Perkins legislation and in some cases they were narrower in focus than this study (Darcy, Boland & Farley, 1979; Edington, 1980; Wentling & Barnard, 1982; Leske & Persico, 1984).

Only a small sample of model systems were reviewed. They were selected because they met the information needs described later in this report and their sources are included in Appendix B.

FOCUS OF THE STUDY

Parameters

The focus of this study was in part predetermined by the requirements of the sponsor, Phi Delta Kappa International, and by the Long Range Plan for Vocational Education developed by the client, the Indiana Commission on Vocational and Technical Education (Education and Jobs, 1988).

The RFP requires that the contractor meet two objectives in carrying out this study and delineated a series of tasks under those objectives:

Project Objective

> Review the research literature and other documents available for evaluation criteria and systems evaluation. Additionally, acquire documents and summarize special key features of the systems of vocational and technical education in selected states.

Tasks

1. Review literature from 1983 to the present on criteria and systems evaluation of vocational and technical education. The search is national in scope.
2. Produce a summary of categories of criteria and systems of evaluation.
3. Provide a bibliography of documents reviewed.
4. Acquire documentation and summarize the key features as identified in the following states:

Florida -	Summarize the use of social security numbers in tracking students after graduation.
Illinois -	Summarize the plan used during the transition period of systems evaluation for vocational and technical education.
Colorado -	Describe total system of organization and administration of vocational and technical education evaluation and how each part is united in the whole.
Wisconsin -	Describe the model of post secondary vocational and technical education.

Georgia - Summarize the integration plan of vocational and academic education.

North Carolina - Describe the advisory functions for all vocational education systems.

Project Objective

Create a set of recommendations identifying evaluation criteria and methods for integrating such criteria into the State of Indiana's current evaluation system.

Tasks

1. Create a set of recommended evaluation criteria for vocational and technical education utilizing the products of the literature review. Present these criteria in some form, such as a matrix.
2. Create a set of recommended methods for integrating evaluation criteria into Indiana's current vocational and technical educational evaluation systems.

Other parameters were set by Indiana's long range plan. The Indiana plan describes a research study to be conducted to provide recommendations in the following areas: **effective outcome based program evaluation; locally directed evaluation; methods to evaluate and validate skill requirement; efficient methods of data collection, storage and analysis including the feasibility of computer use; coordination of data bases and evaluation systems; criteria for evaluation of quality (vocational education) programs and services and evaluation criteria and analysis of effective system evaluation** (Education and Jobs, 1988).

Boundaries for this study were established in accordance with the RFP, Indiana's long range plan and conferences with the sponsor. Accordingly, this study was limited to recommending criteria for the evaluation of quality secondary, local school district delivered vocational education programs and services and making recommendations for utilizing those criteria within the context of Indiana's stated preference for the use of locally directed and outcome based evaluation systems.

Given the constraints of time established by report deadlines, a decision was also made to prioritize the methods used for the collection of data. These priorities are presented in the Evaluation Plans and Procedures section of this report.

Definitions

Throughout this report a number of terms are used which may have different meanings for different audiences. For example, in her report on vocational education, Mary L. Ellis states: **the vocational education program has become so broad and diverse in its response to manpower demands and the needs of all ages and ethnic groups that it is almost impossible to describe in any definitive way** (Ellis, 1975). In the interest of clear communication it seems appropriate to provide a list of important terms with written definitions. These, then, are the meanings assigned to the following terms when used in this report.

Vocational Education	School related activities that take place in secondary schools and include, but are not limited to, programs that produce employability skills specific to general classes of occupations. (Abstracted from Campbell & Panzano, 1985)
Educational Evaluation	The process of delineating, obtaining and providing useful information for judging decision alternatives. (PDK National Study, 1971)
State system of Evaluation	Essentially a meta-evaluation, or the application of evaluation to evaluation activities, conducted by state agencies in monitoring locally directed or state directed evaluations of programs. Standards for meta-evaluations have been developed by the Joint Committee on Standards for Educational Evaluation. (Abstracted from Worthen & Sanders, 1987)
Locally Directed Evaluation	(A procedure in which) program improvement is (seen as) a responsibility of vocational educators at all levels, but educators in local schools bear primary responsibility. (Hull, 1987)
Vocational Education Outcomes	All outputs, products, consequences, effects, results and impact of vocational programs. (Darcy, 1979)
Criterion	A statement that describes or designates a variable of instruction or an attribute that is required. (Wentling, 1985)

Standard	A specific level, either quantitative or qualitative, that has been set for a criterion. (Wentling, 1985)
Content Analysis	(A procedure which) aims for generality and derives meaning from the comparison of several documents (and which) makes inferences by objectively and systematically identifying specified characteristics of messages. (Guba and Lincoln, 1981)
Unstructured Interview	Interviews using a non standardized format and allowing the person being interviewed to describe and structure the information being reported. (Guba and Lincoln, 1981)

Questions Used to Focus the Study

In their report on vocational education outcomes, Darcy, Boland, and Farley proposed that future vocational education research, development and evaluation activities should focus on obtaining answers to the following set of questions. (Darcy, Boland, & Farley, 1979)

1. What is vocational education?
2. Who are vocational students?
3. What are the outcome goals of vocational education?
4. What outcomes should be used as criteria to evaluate vocational education, and why?
5. What data are needed to describe and assess the effects of vocational education from the national as well as state and local perspectives, and how can such data best be collected and analyzed?
6. What standards should be applied to particular outcomes measures for purposes of evaluation, and how should they be determined?
7. What specific input variables (under the headings of Student Characteristics, Educational and Social Context, Resources, Goals, and Processes) in the vocational education enterprise are significantly associated with particular outcomes, and how are they functionally related?
8. To what extent do extraneous forces and error factors inhibit the production of knowledge concerning "the correlates" of particular vocational education outcomes?

9. What evaluation methods and procedures should be used to produce accurate and credible generalizations at the national level regarding the outcomes of vocational education?

10. How can evaluation findings on vocational education outcomes best be communicated to relevant audiences, including policy makers, practitioners, and other evaluators to assure that such findings will be applied in the interests of improved educational effectiveness and efficiency?

All ten questions are certainly appropriate for consideration by Phi Delta Kappa, as they assist the Indiana Commission on Vocational and Technical Education in carrying out their research study for priority area B. Evaluation and Accountability. The primary question this study will address is the fourth, What outcomes should be used as criteria to evaluate vocational education, and why?

As explained in the parameters narrative which precedes this section, the focus of this study goes beyond just recommending and justifying the selection of such criteria. In total, the focus of this study will be structured by obtaining answers to the following two questions.

- What outcomes should be used as criteria to evaluate vocational education, and why?
- What steps should be taken to insure the utilization of those criteria?

Information Needs

In order to answer the two proceeding questions and to develop a study design, certain categories of information were judged to be essential. The following sets of data were collected and used.

1. Sets of criteria and their organizers which are currently being used by states which have gained national recognition.
2. Sets of criteria and their organizers which have been recommended by recognized experts in the field.
3. Criteria required by federal legislation.
4. Criteria and characteristics which reflect current trends in the field of vocational education evaluation.

5. Characteristics of state vocational education evaluation systems which have gained national recognition.

6. Characteristics of systems which are recommended by authorities in the field.

7. Characteristics of systems which are required by legislation.

8. Concepts and principles from the change process and innovation literature which address educational institutions.

STUDY DESIGN AND PROCEDURES

Design of the Study

The design of this study was modeled on the guidelines presented by Blaine Worthen and Jim Sanders in their book on educational evaluation (Worthen & Sanders, 1987).

These recommended design elements and their location in this report are as follows.

1. Clarifying the reasons for the study: Introduction
2. Setting boundaries for the study: Focus of the Study - Parameters
3. Identifying and selecting study questions: Focus of the Study - Questions
4. Identifying information needs: Focus of the Study - Information Needs
5. Identifying appropriate methods for organizing and analyzing information: Procedures - Collection
6. Determining appropriate methods for organizing and analyzing information: Procedures - Organization and Content Analysis
7. Developing a management plan: Project Activities and Timeline

Procedures

Collection Procedures

As described earlier, a decision was made to prioritize the steps to be taken in the collection of information. Priority one was to collect the evaluation system documents from the six identified states. Priority two was to collect descriptive data on those state systems using unstructured telephone interviews with appropriate state agency personnel. Three was the collection of any previous written syntheses of reviews of state evaluation systems. Four was the collection of information obtained from computer and hand searches of identified data bases and libraries. Five was the collection of information produced from a review of the indices of periodicals and journals.

As a preliminary step, The Evaluation Center contracted for two papers to be written by experts in the field of vocational education evaluation. Both consultants were asked to deliver a set of idealized criteria and their organizers and present a rationale for their selection. The rationale was either presented in writing or at the work session which is described later in this report. Both of those papers are attached (Appendix F., page 8).

Agencies known to be conducting research in vocational education evaluation were contacted. Personnel from regional laboratories and research centers were asked to identify resource people and/or citations from the literature. These individuals are listed in Appendix D.

Two computerized ERIC searches were conducted of the RIE and RIVE data bases. The descriptors Secondary Vocational Education, Evaluation, Criteria, Program Evaluation, State Vocational Education Programs and State Departments of Education were used in conjunction with some key terms (e.g. educational outcomes, statewide planning, technical education, decision making, linking agents, delivery systems, program implementation, change strategies and agency cooperation). The search yielded 96 citations from the years 1983-1989.

A search of the literature on criteria, evaluation systems, evaluation models and educational change process was conducted using the Current Index to Journals in Education. A hand search was conducted using the WMU Education Library, the WMU Evaluation Center Library, the Library at the Center on Education and Training for Employment at The Ohio State University and private collections of Evaluation Center staff. A total of 173 documents or abstractions of documents were collected. Of these, 133 were read and 105 were used in the review and content analysis.

A first draft of the Bibliography, attached here as Appendix A, was forwarded to project consultants to be judged for comprehensiveness. Their additions are included in the final draft.

Unstructured interviews were conducted with state agency personnel and responses noted.

Organization Procedures

Collected information was transferred to file cards and organized into files coded by the eight information categories shown on pages 10 and 11 of this report.

Content Analysis Procedures

A content analysis was done grouping common and disparate evaluation frameworks, criteria, characteristics and concepts. The results of these analyses produced sets of findings which are attached (Appendix F, page 44). These findings were used by the panel of experts during their work session.

The panel met for two days in March to review the findings and produce a set of recommended criteria based on these findings and judged against selected evaluation standards. The four activity sessions are described in detail in Appendix F. The product of this work session is shown as Table 3 and described in the Recommendations section of this report.

In order to validate the accuracy and completeness of the summaries of state systems, the initial drafts of these findings were forwarded to the appropriate state agency officials with a request to correct any inaccuracies and check for omissions. The final edited drafts appear in the next section.

FINDINGS

Introduction

The findings of this study fall into three major groups:

1. The norms or standards set by a selected group of states and the agreement of authorities in the field of vocational education evaluation in regard to the characteristics of secondary vocational evaluation systems in use.
2. The norms or standards set by a selected group of states and the consensus of authorities in the field in regard to what criteria should be used to measure the effectiveness of secondary vocational education programs.
3. Summaries of identified state evaluation system features which have gained national recognition.

The findings are derived from a content analysis and interpretation of the information collected under the eight "information needs" categories listed on pages 10 and 11. Compiled sets of the collected findings are attached to this report as part of the appendices (see Appendix F., page 44).

The findings for groups 1 and 2 above are interpreted in the tables which follow. Table 1 shows a ranking of characteristics based on how many of the six selected states have that system component, sub-system or procedure appearing in published state plans or support materials. Table 2 displays 33 criterion categories used in eleven selected states and presented in order of frequency of use.

This listing of organizers does not imply that any of the 33 variables are not being addressed by evaluation activities in use in a particular state, it only shows that the particular variable was not identified as a category of sub-variables in their system.

The third group of findings are reported here as summaries. These have been checked for accuracy and completeness by the appropriate state agency officials. These summaries follow on page 18.

PDK VOCATIONAL AND TECHNICAL EDUCATION EVALUATION PROJECT
STATE* EVALUATION SYSTEM CHARACTERISTICS

TABLE 1

Characteristic	# of States
There is a component, sub-system or procedure published in the State's plan for secondary vocational education evaluation designed to collect data to determine whether or not:	
Local Programs:	All 6 states
1. reflect the workplace and new and emerging technologies	
2. are responsive to current and projected occupational needs	
3. facilitate entry and ease the school to-work and secondary-to post secondary transition	
4. meet the needs for general occupational skills and improved academic foundations	
5. use materials, equipment and curricula to meet increased technological demands	
State Agencies:	All 6 states
1. provide for fiscal management of Federal & State monies	
2. develop a statewide plan using labor market data	
3. establish procedures for supervising & providing technical assistance	
4. evaluate local programs	
5. insure compliance with Federal and State civil rights statutes	
6. provide staff development activities	
7. provide leadership to the LEAs	
8. conduct program improvement efforts including research, development & dissemination	
9. require self-studies/reviews by LEA's	
10. conduct external/validation reviews	
11. require submission of program improvement plans	
12. provide technical assistance based on the LEA program improvement plan	
The LEA:	3 states
1. conducts needs assessments to identify potential clients and projected labor market needs	
2. uses task lists and task analyses for curriculum development	
3. has established a partnership between secondary and post secondary to insure a smooth transition	
The LEA:	One state each
1. provides day care services for the children of secondary students	
2. specifies the roles, structure and responsibilities of administrators re: vocational education	
The SEA:	One state each
1. has developed curriculum guides which integrate academic and occupational skills	
2. has developed a long term program improvement plan which allows for a smooth transition from "old" to the "new"	
3. provides for multiple cooperative advisory groups which provide counsel at both the State and local level	
4. uses existing computer data bases from private, military and government employers and post secondary institutions for follow-up information on students	

*Colorado, Florida, Georgia, Illinois, North Carolina and Wisconsin

PDK VOCATIONAL AND TECHNICAL EDUCATION EVALUATION PROJECT
MATRIX OF EVALUATION CRITERION CATEGORIES* USED IN SELECTED STATES

TABLE 2

Categories	Selected States										Frequenc
	CO	FL	GA	IL	NC	WI	MI	ND	OH	OR	VA	N=11
Instructional Program Content and Organization	X	X	X			X	X	X	X	X	X	9
Student Placement and Follow-up	X		X	X	X	X	X	X	X	X		9
Equipment, Tools and Supplies		X			X	X	X	X	X	X	X	8
Program Facilities	X	X	X		X		X		X	X	X	8
Labor Market Justification				X	X	X	X	X	X			6
Vocational Guidance and Counseling	X		X			X	X		X	X		6
Instructional Materials	X	X					X	X			X	5
Administrative Support	X		X				X		X		X	5
Changes Occurring from Previous Evaluations						X	X		X	X	X	5
Teacher Qualifications		X			X	X			X	X		5
Business and Community Resources	X		X			X	X		X			5
Advisory Committees						X	X			X	X	4
Access to Programs							X	X	X		X	4
Vocational Equity Goals						X	X				X	3
Student Performance				X	X		X					3
Existence of Student Organizations	X					X				X		3
Promotional Activities/Student Recruitment						X				X	X	3
Student Enrollment				X	X							2
Student Satisfaction				X		X						2
Competency based							X				X	2
Philosophical Base for Program Development			X			X						2
Program Standards and Outcomes											X	1
Short and Long Range Program Planning			X									1
Cost Effectiveness				X								1
Instructor, Parent and School Board Satisfaction						X						1
Continued Education Status							X					1
Variations in Male/Female Enrollment						X						1
Safety										X		1
Administrator Inservice							X					1
Special Populations Performance								X				1
Individualized Educational Plans							X					1
Cooperative Work Experience										X		1
Grade Level at Which Courses are Offered		X										1

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*These are variously labeled as criteria, standards, outcomes, variables, activities, areas of assessment, or vital signs in state evaluation system documents.

Summaries of Key Features from Selected State Evaluation Systems

Development and Validation Procedures

State evaluation systems, identified in the Phi Delta Kappa RFP as effective and nationally recognized, were in Colorado, Florida, Georgia, Illinois, North Carolina, and Wisconsin. Printed descriptions of these systems were obtained from appropriate state agency officials. Their provision of information and review of materials was critical to the successful completion of this study and we thank them. Titles of documents and names and titles of SEA contact people appear in the Appendices.

Initial drafts summarizing the key features of these systems were developed based upon documentary analysis and phone interviews of SEA personnel. These drafts were then forwarded to the SEAs, requesting that they review the drafts for accuracy and completeness. Their additions, deletions and revisions were incorporated into the final drafts of the summaries which appear below.

COLORADO

Management and Administration

The State of Colorado maintains state-wide quality control and direction for vocational education through the organization and administration of four separate evaluation activity areas:

1. The local review process
   (local review and validation of vocational programs)
2. The program approval process
   (required state approval of plans for each vocational education program including handicapped, cooperative, and supplemental services)
3. The compliance process
   (state mandated LEA submission of compliance checklists)
4. The process for providing services by state staff
   (validation review, follow-up procedures, technical assistance)

To implement the local review process, the State of Colorado, under the direction and authority of the Colorado State Board for Community Colleges and Occupational Education, designed an evaluation system "To promote, strengthen, and assure the local operation of quality vocational programs and services on a statewide basis." Entitled **Quality Vocational Program Review and Improvement Process**, and referred to as the Q-Process, it was described by Dr. Greg Smith, Coordinator of Institutional Research and Evaluation, during a telephone interview.

> "The Q-Process is a self review followed by a validation process. Our (Colorado Community College and Occupational Education System) standards are designed to meet the requirements of the Carl Perkins legislation (P.L. 98-524 - Oct. 19, 1984). The instrument we are using is a little too heavy on process, not enough emphasis on program outcomes; (we) are revising and moving to a desk audit procedure, exception reporting and on-site technical assistance."

The Q-Process is designed to meet certain objectives beyond the general one of local control. These are to:

- provide an information base for planning, improvement and decision making
- examine the impact of local efforts
- assure accountability in the use of federal, state and local funds
- examine and improve utilization of business and community resources
- examine support services including guidance, counseling and placement
- establish follow-up and technical assistance procedures

Important characteristics of the Q-Process system are: utilization of a variety of criteria; ease of application and quick interpretation; provision for check and balance; placement of responsibility for evaluation under local control; provision for planning, coordination and supervision of programs and services; and interface with other state planning and evaluation procedures.

There are essentially three phases to this system: review, validation and technical assistance. The self-review phase is conducted by program instructors and managed by the LEA administrator. The validation phase is conducted by a validation team and managed by the LEA administrator. Objectives and procedures for all participants are clearly stated in the documents and instruments.

For every educational program six factors are evaluated using checklists of criteria:

1. the instructional program
2. program facilities
3. business and community resources
4. vocational guidance and counseling
5. student placement and follow up
6. administrative support

Following the self review phase, an improvement plan is developed by program instructors; following the validation phase, an improvement plan is developed by the validation team; at the completion of both, an action plan is developed by the LEA administrator. Requests for technical assistance may then be submitted to the state, leading to phase three. One documented example of technical assistance activities the state is providing for school districts was reviewed for this study (with SEA and LEA names deleted). It focused on the LEA's eight vocational education offerings, in order to validate the efficacy of maintaining, expanding or eliminating any of the eight programs on the basis of their relationship to the then current Colorado labor market. The findings in the document were well supported by the current data, the analyses were specific and clearly summarized and the recommendations appeared to be useful to local school personnel for program planning.

This kind of technical assistance is only one aspect of a variety of follow up services the state of Colorado is able to provide. A flow chart of the process is shown on the following page. (Figure 1)

QUALITY VOCATIONAL PROGRAM REVIEW AND IMPROVEMENT PROCESS

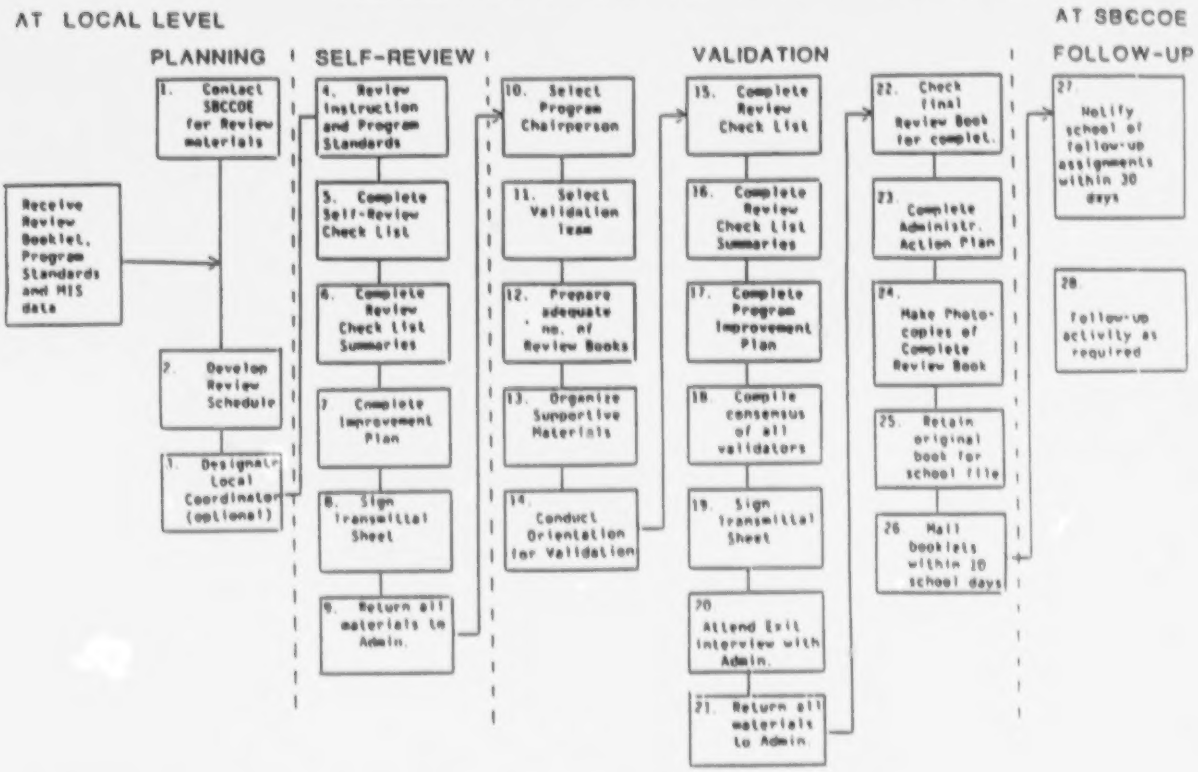
AT LOCAL LEVEL
AT SBCCOE
PLANNING
SELF-REVIEW
VALIDATION
FOLLOW-UP
Receive Review Booklet, Program Standards and MIS data
1. Contact SBCCOE for Review materials
2. Develop Review Schedule
3. Designate Local Coordinator (optional)
4. Review instruction and Program Standards
5. Complete Self-Review Check List
6. Complete Review Check List Summaries
7 Complete Improvement Plan
8. Sign Transmittal Sheet
9. Return all materials to Admin.
10. Select Program Chairperson
11. Select Validation Team
12. Prepare adequate no. of Review Books
13. Organize Supportive Materials
14. Conduct Orientation for Validation
15. Complete Review Check List
16. Complete Review Check List Summaries
17. Complete Program Improvement Plan
18. Compile consensus of all validators
19. Sign Transmittal Sheet
20. Attend Exit interview with Admin.
21. Return all materials to Admin.
22. Check final Review Book for complet.
23. Complete Administr. Action Plan
24. Make Photo-copies of Complete Review Book
25. Retain original book for school file
26 Mail booklets within 10 school days
27. Notify school of follow-up assignments within 30 days
28. Follow-up activity as required

Figure 1

FLORIDA

Tracking Students for Follow-up

In 1984 the Florida Department of Education initiated the Occupational Identifier Project. The success of the project led to its establishment as the **Florida Education and Training Placement Information Program (FETPIP)** as an on going program within the Department. The purpose of FETPIP was to provide the state with accurate follow-up information on former vocational secondary and post-secondary students in order to evaluate publicly financed training programs.

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The program is described in materials published by the Department (Florida DOE, 1988). The description which follows was abstracted from a review of those documents and a telephone interview with Mr. Jay Pfeiffer, Program Administrator for FETPIP.

The program uses existing agency computer data bases to match Florida students by social security number in order to determine their employment and continuing education status. Using existing data has kept the costs of tracking students well below the costs of more traditional methods of survey and provided information for an analysis of employment and training relationships and earnings, as well as information useful to longitudinal studies of employment and career paths.

The program is a cooperative effort between the Department of Education and those state and federal agencies which provide access to their data. Students are matched by social security number to the state unemployment wage report records, covering approximately 95% of the civilian labor force in Florida. Students are also matched to Department of Defense records for military personnel and to the Federal Personnel System and the U.S. Postal Service for federal civil service employees. At this time the only employment data the program cannot access is the civilian labor force outside of Florida.

Once a match is made a form is generated by FETPIP which is sent to employers with the former student's (employee's) name and employers are asked to insert the student's job title. These are run through job categories in order to standardize all job titles. The information collected by FETPIP allows the Department of Education to categorize students by age, sex, race and programs taken during schooling and compare these data to current occupations.

Although the compiled data is useful to other state agencies and groups, it is of primary importance to the Department for vocational education program planning, evaluation and career guidance. One outcome of program work has been the implementation of a series of training sessions for high school and post-secondary counselors conducted by FETPIP staff. The analysis of earnings and labor market trends has been seen as very useful in the career guidance and counseling of students.

GEORGIA

Integration Plan

Under a contract with the Office of Instructional Programs of the Georgia Department of Education, a preliminary planning and evaluation model for secondary vocational education was developed by Dr. William Hull (Hull, 1987). The plan was designed to cover a five year period of time and is now being field tested in various sites around the state. Some preliminary results have already led to revisions of existing criteria and standards.

In this preliminary evaluation plan Hull recommended that, in carrying out the implementation phase of innovations, it was advisable for the state department to build on the strengths of its existing system. Georgia already had a prescribed "quality core curriculum" based on minimum standards for public school programs, K-12, which were set by state legislation. Based on Hull's recommendation and the existence of this prescribed curriculum, the decision was made to develop fifty-five specific course content guides which incorporated selected occupational skills. Through this development activity vocational education criteria are being infused into guides which local school districts will use in the implementation of quality programs for all students.

ILLINOIS

Transition Plan

As a result of a policy study commissioned by the Illinois State Board of Education in 1982 a new policy statement on Education for Employment was adopted in December 1984. An outgrowth of the new policy was the development of a long range plan with established procedures to identify essential (program) elements, delivery system, learner outcomes, evaluation and program impact. Initial planning activities were conducted between 1986 and 1988 and the plan for implementation FY 1989-90 was produced.

The State Plan for Implementing **Education for Employment in Illinois** and the Board's Timeline for Implementation describe evaluation activities as follows. (Illinois State Board, 1988)

> Following program implementation a coordinated approach to self-evaluation and State Board verification of evaluation results will be implemented. Program outcomes or vital signs will form the focus of the self-evaluation. This will include an analysis of program placement, employer satisfaction, student satisfaction, student performance, student retention, enrollment trends and program costs.

Three Stage Evaluation System

Dr. John A. Klit, Manager, Vocational Education Program Approval/Department of Adult, Vocational and Technical Education described Illinois' transition plan as a three stage computer assisted evaluation system. The following description of that system was abstracted from the 1989-90 state plan.

> The three stages of the evaluation system are: Basic Indicator Assessment, In-Depth Analysis, and Program Improvement Planning. They are designed to be implemented over a period of time, thus allowing for an organized transition from existing program curricula to new or revised program curricula.
>
> During the first stage surveys are administered to employers and current and former students; students are tested and reviews are made of existing documents. Collected data are related to the seven basic indicators of placement, enrollment, employer satisfaction, student satisfaction, student performance, cost containment and labor market justification.
>
> Interpretation is made of the computer assisted data analysis and only the lowest, indicating areas of concern, are targeted for stage two, In-Depth Analysis.
>
> During stage two the computerized system guides the investigation of identified areas of concern. This system serves as an on-site evaluation guide for local program personnel. LEA personnel work through a series of investigations by using a set of questions and suggestions for data collection which make up this part of the computerized "expert system."

> The third stage, Program Improvement Planning begins with the interpretation of the data generated in stage two. These interpretations and a local rationale for the program elements being reviewed form the basis of a locally written program improvement plan. This plan specifies the steps to be taken to improve areas of concern while maintaining stable and healthy program elements. Upon completion it is submitted to the state for approval and allotment of funds.

NORTH CAROLINA

Advisory Functions

According to information received from a telephone interview with Dr. Meg Murphy, Director of Program Improvement and Evaluation, Department of Public Instruction, North Carolina provides for three advisory groupings which function cooperatively, gather information and give counsel at both the state and local level. There is a State Advisory Council, state-wide advisory committees for each occupational area, and local advisory (VEIC) committees for LEAs who make recommendations regarding program improvement beyond the local level.

In the North Carolina state plan for FY 1988-90, the section on planning activities includes the statement "State and local planning will be designed to maximize the utilization of agencies, groups, and individuals concerned with the education and training of clientele referred to in the (Perkins) Act." (North Carolina, 1988)

Under Benefits, the State anticipates that the result of this state and local joint planning effort will be efficiency in the use of resources and a reduction or elimination of duplication of effort. To meet this goal the Department of Public Instruction has specified eleven activities to be conducted by the advisory committees in coordination with JTPA.

1. Orientation Meeting(s)
2. Review Occupational/Community Surveys (Job Needs)
3. Advise on Course Content (Relevance of Programs)

4. Review of Student Placement Data

5. Equipment and Facility Planning Recommendations

6. Identification of Potential Vocational Teachers

7. Identify community Resources to Support Programs

8. Review Evaluation Data

9. Advise on Local Plan Development
   a. Three Year Plan
   b. Annual Application

10. Conduct Program Visitations in the LEA

11. Conduct Program Visitations Outside the LEA

WISCONSIN

Post Secondary Model

The State of Wisconsin has a separate post secondary vocational education system with an independent State Board. Reports and materials describing secondary programs were collected from Mrs. Marlene Dobberfuhl, Data Collection Supervisor, Wisconsin Department of Public Instruction and incorporated into another section of this report.

Information on the post secondary system was obtained through a telephone interview with Mr. John Kroll, Executive Assistant for the Wisconsin Board of Vocational, Technical and Adult Education and from a review of documents and publications he provided.

> "According to Mr. Kroll the Board has responsibility for vocational technical education of part-time, one and two year degree programs, and apprenticeship programs. The Wisconsin Vocational, Technical, and Adult Education System is comprised of 16 districts which operate 46 technical college campuses. The system works cooperatively with the University of Wisconsin, Department of Economic Development, and the Department of Health and Social Services. Additional inter-agency cooperation is achieved through participation of three ex-officio members on the State Board--the President of the University of Wisconsin Board of Regents, the State Superintendent of Public

> Instruction and the Secretary for the Department of Industry, Labor and Human Relations. These three, plus twelve regular members serving six year terms, form the policy board.
>
> There is a State Director of Vocational, Technical, and Adult Education, two division administrators and additional staff members all with responsibility for overseeing the operation of programs in the 16 regional districts. Forty-nine percent of the funding of district programs is provided by property taxes from the region being served. State aid approximates 24% of the cost."

Board publications and the Wisconsin statutes for 1987-88 have provided a more detailed look at the operation of the system (Wisconsin Board, 1988). A summary of salient features of the system follows.

The Wisconsin Board of Vocational, Technical and Adult Education oversees programs and services in sixteen regional districts. Each region is comprised of one or more counties, cities or school districts in any contiguous combination and regions may request to reorganize through a petition filed with the Board. The Board also has the authority to reorganize districts on its own motion.

The State Board has responsibility for the establishment of rules and general policies applicable to all districts. Each district board has responsibility for administering district programs and establishing written policies which are consistent with the rules and general policies established by the State Board. Membership on district boards is governed by state statute and is made up of three employers, three employees, a school district administrator and two additional members, all residing within the region. Members serve staggered three year terms and at least two of the members are required to be elected officials who hold state or local office. Each district board has the authority to employ a district director, as well as supervisors, coordinators, teachers and support staff as necessary, to administer and implement programs and services.

Local funding is obtained through a district tax levy limited to 1.5 mills on the taxable property of the region and is used for operating and maintaining district schools, acquiring equipment and making capital improvements.

State funding is provided primarily through Wisconsin General Aid and Incentive Grant appropriations. Each of the district boards receives general aid funds annually on the basis of "district aidable cost" or the annual cost of operation. Aidable cost excludes expenditures for auxiliary and community service programs; costs reimbursed with federal revenues; receipts for contracts for services or the sale of articles manufactured in district schools; all receipts from incentive grants; and all fees collected from fees, tuition, driver education and chauffeur training.

Incentive grants are awarded annually by the State for assisting districts in: the development or expansion of adult high school, adult basic education and English as a second language courses; the funding of new or expanding programs based on emerging skilled training needs or projected long-term job growth; the purchase or lease of high cost instructional equipment; programs providing classroom instruction for apprentices and upgrading of journeymen; and educational programs that would not otherwise be established or maintained due to limits in district fiscal capacity.

As of 1989, each district is operating a technical college with one to five regional campuses. As reported in the Board's February 1989 publication "VTAE Facts," during 1987-88, students were enrolled in six post high school programs in all sixteen districts: postsecondary programs which are subdivided into college parallel, associate degree, and vocational. Adult programs are classified as community service programs, subdivided into cooperative services, district services, and vocational adult programs. Total enrollment in all six program categories for 1987-88 was 56,648 students.

RECOMMENDATIONS

Recommended Criteria and Categories for the Evaluation of Secondary Programs

The criteria being recommended for the evaluation of locally delivered secondary vocational/technical education programs were developed by a panel of experts. Descriptions of the development process are explained under the Procedures section and additional details have been provided in Appendix F.

The criteria are grouped into three program areas: Resources, Processes, and Results. The three categories and twenty-eight criteria are shown in Table 3 and elaborated in Appendix G. These two documents represent the panel's judgment about criteria which are critical to secondary vocational/technical education.

A number of issues and concerns were raised and addressed during the two day work session. Initially there was discussion to clarify how these proposed criteria would fit into the Indiana evaluation system. Findings from the review of criteria utilization were presented and discussed. Definitions of relevant terms were shared and explored. A few of the questions raised and discussed by the panel were: Why do secondary schools have separate evaluation systems for academic, general and vocational programs? Why do secondary schools typically use job placement as a measurement of program success rather than the measurement of student achievement of skills necessary for placement in a job? and Are some criteria really useful when practitioners cannot always be clear about which secondary students comprise the vocational education program population (e.g. vocational education "explorers")?

The justification for the selection of the 28 criteria is based on judgments made through sharing study findings, as well as experiential "knowns" which were determined to affect the selection task.

The questions used in rating and judging proposed criteria were:

1. How well does it address the achievement of national goals, ideals or social values?
2. How well does it speak to the needs of actual or potential clients?
3. How well does it meet agreed upon norms or standards set by experts or other relevant groups?
4. Is it clear, inclusive and feasible?
5. Is it proper (ethical), useful to the intended audience(s) and will it produce accurate information?

In presenting the criteria the panel requested that the following caveats be stated:

1. The recommended criteria will be useful only if iteration occurs and the outcome of measuring program results is fed back into the evaluation system as resources for planning and revision.
2. Some of the criteria apply to academic, general and alternative programs; they are critical to vocational/technical evaluation but not exclusively.
3. The criteria must be used for the purpose of identifying relationships among all three categories. For example, what relationship, if any, exists between student skills, abilities and interests (Program Resource) and enrollment and drop-out rates (Program Results)
4. There is a need for measuring long term impact of programs. For example, the larger question of community wellness which goes beyond a local program evaluation system.
5. The list is designed to be comprehensive, but vocational educators should not be held solely accountable for all eight Program Results as other secondary school faculty and administrators should share the responsibility for achieving the results. It is important to evaluate vocational education within the context of the total secondary school environment.

The section which follows describes a five step tactical plan which is being recommended for criteria utilization. It is critical that the recipients of this report recognize that the twenty-eight criteria being presented here for utilization are provisional. The procedures outlined in the tactical plan are designed to allow vocational educators at all levels within the state to study and critique these criteria. The revisions resulting from implementing each of the five steps will allow the various audiences to develop ownership of the criteria as the state moves from the first step, creating an awareness to the last step, full institutionalization.

PDK VOCATIONAL AND TECHNICAL EDUCATION EVALUATION PROJECT

RECOMMENDED CRITERIA

TABLE 3

Secondary Vocational Education Program Criteria

Program Resources

1. Philosophy & Goals
2. Learners
    - skills, abilities, interests
    - demographic information
3. Staff
4. Curricula
5. Materials
6. Facilities
7. Business & Community Resources
8. World-of-work/Labor Market Data
    - current
    - projected
9. Demographic Projections
    - potential learners (clients)
    - potential staff
    - community
10. Funding Levels
11. Formative & Summative Results

Program Processes

1. Planning
    - stakeholder involvement & linkages
    - environmental scanning
    - program adaptability
2. Organizational Arrangements
    - governance structure
    - LEA leadership & commitment
3. Student Assessment & Diagnosis
    - knowledge, skills, application of skills
    - occupational tests
    - follow-up data
4. Staff Development
5. Curricula
    - development
    - integration
    - articulation
6. Programs
    - cooperative education
    - alternative delivery systems
    - vocational student organizations
7. Instruction
    - awareness, orientation, exploration
    - occupational skills
    - safety
8. Career Guidance & Recruitment
    - access & equity
    - special needs populations
9. Student Services
    - job placement: in school, post school
    - career development (VSO)
    - other

Program Results

1. Student Knowledge & Skills
    - personal awareness & development
    - creativity
    - critical thinking
    - problem solving (individual)
    - occupational awareness
    - career exploration
    - safety
    - consumer
    - employability
    - occupational
2. Student Application of Skills
    - interpersonal
    - study
    - academic
    - self discipline, self reliance
    - problem solving (as a group)
    - respect for rights of others
    - occupational
3. Access & Equity
    - special populations
    - non-traditional students
4. Enrollment & Drop Out Rate
5. High School Completion
6. Follow-up
    - continued education
    - employment
7. Satisfaction with Program
    - students
    - employers
8. Cost Effectiveness

Recommended Steps For The Utilization Of Criteria

The findings which provided the foundation for these recommendations came from a review of the literature on change processes, product utilization, evaluation frameworks and evaluation processes which relate to or speak directly to vocational education at the secondary school level. Citations from the literature review are listed in Appendix B.

At the risk of oversimplification, these findings can be encapsulated in two categorical recommendations for use by State level agencies:

1. Develop a strategic plan, and
2. Develop tactical plans

What follows is an attempt to relate these two recommendations to the integration of the proposed set of evaluation criteria into an existing evaluation plan. A display of the overall system for criteria utilization is shown as Table 4 on the last page of this report.

Strategic Plan

On July 14, 1988 the Indiana Commission on Vocational and Technical Education approved a strategic plan, **Education and Jobs for Indiana's Future: A Long Range Plan for a Comprehensive Vocational Education Program in Indiana**.

On pages 4 and 5 this document outlines the Evaluation and Accountability Component of the plan and lists eight strategies designed "to address the priority of evaluation and accountability" (Education and Jobs, 1988). These strategies are as follows:

1. Conduct a research study on evaluation to provide recommendations in the following areas:
    - (a) Effective outcome-based program evaluation
    - (b) Locally directed evaluation
    - (c) Methods to evaluate/validate skill requirements
    - (d) Efficient methods of data collection, storage and analysis including the feasibility of computer use

(e) Coordination of data bases and evaluation systems
(f) Criteria for evaluation of quality vocational and technical education programs and services
(g) Evaluation criteria and analysis of effective system evaluation. (Begin: 7/1/88; end 1/1/90)

2. Establish approved criteria for the evaluation of vocational education programs, services, activities and special projects taking into account the research study identified above. The approved criteria will provide standards for evaluating duplication of effort and outcomes across delivery systems. (Begin: 7/1/88; end 3/30/89)

3. Collect, analyze and make appropriate data and information available for planning purposes based on evaluation criteria and methods. (On-going; 8/1 of each year)

4. Develop a plan for technical assistance to local providers of programs, services, activities and special projects. (Begin: 7/1/88; end: 9/1/88)

5. Increase local accountability of vocational and technical education and training programs based on student outcomes and related to labor market needs. (Begin: 10/1/88; preliminary impact: 6/30/92; major impact: 6/30/94; on-going)

6. Develop and implement data systems for evaluation of delivery of vocational and technical education at every level. (Begin: 7/1/88; end: 1/1/90)

7. Study and make recommendations regarding evaluation criteria which identifies the effectiveness of counseling programs. (Begin: 7/1/88; end: 1/1/90)

8. Develop a method of accountability for each strategy identified in the long-range plan. (To be determined in conjunction with other agencies)

In order to implement these broad strategies, as they relate specifically to integrating a new set of criteria into an existing evaluation plan, the following tactical plan is recommended.

Tactical Plan

This section recommends five steps for integrating a new set of evaluation criteria into an existing evaluation plan:

1. create an awareness of the proposed criteria;
2. demonstrate the application of the criteria;
3. test the criteria in selected secondary school settings;
4. install the criteria; and
5. institutionalize the criteria.

An example follows each description of the five steps listed below in an attempt to further clarify the recommendations.

1. Create an awareness of the proposed criteria

Members of evaluation committees, teachers, administrators, school board members and other appropriate people need to learn about and become aware of the potential use and implications of the criteria. They need to know that the State is considering the adoption of the criteria. They need a clear understanding of the proposed criteria and a clear understanding of how the criteria fit in the existing evaluation plan.

To that end, state level agency officials should develop appropriate written materials and orientation and training activities to create widespread awareness of the criteria and the existing evaluation plan among the various constituents. Using these materials and activities the state level agency should:

A. Identify the various audiences and determine the level of their involvement in the criteria adoption process.
B. Determine the level of awareness necessary to insure effective involvement.
C. Conduct and evaluate the orientation and training activities
D. Revise the criteria and/or the evaluation plan based on the results of the orientation and training activities.
E. Inform the audiences about the revisions and the reasons for these revisions.

Example: The state level agency identifies key legislators, the state school board association, the state association of vocational educators, the state association of school administrators and the state association of chambers of commerce as some of the awareness audiences. The agency determines that these audiences need a broad general awareness of the proposed criteria and the existing evaluation plan. A 30 minute video tape presentation is developed, field tested, revised and presented to these audiences. Based on written evaluation of the video presentation the wording of three of the criteria is revised to more clearly reflect their meaning. Copies of the revised video, with the reasons for these revisions are mailed to each of the awareness participant agencies.

2. Demonstrate the application of the criteria

Prior to field testing, the now aware constituents need to have a sense of how the criteria and evaluation plan might work in actual practice.

To that end, the state level agency should develop appropriate materials and demonstration activities designed to create an understanding among the various constituents of how the criteria and the evaluation plan might work in actual practice. Using these materials and activities, they should:

A. Identify the audiences who should participate in demonstration activities
B. Determine the extent of demonstration required to insure effective involvement
C. Conduct and evaluate the demonstration activities
D. Revise the criteria and/or the evaluation plan based on the results of these demonstration activities
E. Inform the awareness and demonstration audiences about the revisions and the reasons for these revisions

Example: The state level agency develops a demonstration packet consisting of the awareness video from step 1 above, an hour-long documentary film demonstrating the use of the proposed criteria and existing evaluation plan in a selected area vocational school. The agency also develops a set of hands-on, small group activities to accompany the film. After field test and sessions of the hands-on activities, the awareness video, film and attendant activities are used for demonstration presentations in every local school district in Indiana. Local school boards, administrators, teachers and students participate in the presentation. Based on written evaluation, the demonstration activities are revised to encourage more active participant involvement. Each local school district receives a copy of the revised demonstration packet and a brief description of the reasons for the changes.

3. Test the proposed criteria

Prior to installation of the criteria, the various audiences need further evidence that the criteria and evaluation plan will work in actual practice.

To that end the state level agency should develop appropriate materials and field test activities designed to create an understanding of how the criteria and evaluation plan work in actual practice. Using these materials and field-test activities, they should:

A. Select the field test sites from a representative pool of advocates, neutrals and detractors
B. Determine the nature and extent of field testing required to insure effective future commitment
C. Conduct and evaluate the field test activities
D. Revise the criteria and/or the evaluation plan based on the results of field test activities
E. Inform the awareness, demonstration and field test audiences about the revisions and the reasons for these revisions

If the field tests failed to maintain the advocates, coopt the neutrals and sway some of the "detractors", it is critical to further field-test the revised criteria and/or evaluation plan.

Example: Based on the results of the demonstration activities, the state level agency selects twelve local secondary schools for field test activities: 4 apparent advocates, 4 apparent neutrals and 4 apparent detractors. The agency selects and assigns a full time field test manager to each field site. The field test manager works for a year with local staff and agency staff to develop field test materials and activities. During and at the end of the second year of field testing, materials and activities are revised as appropriate. Summative results of the field test are provided to the awareness and demonstration audiences.

4. Install the criteria

Prior to accepting the criteria as part of their "daily way of life," the various audiences need clear evidence that the widespread application of the criteria will produce results which are proper, useful, feasible and accurate.

It should be noted that most state level agencies recognize the need for awareness, demonstration and field test activities prior to installation of innovations at the local level. Too often, they view the installation step as the final step in implementing/adopting the innovation. It is clear from research studies that much more is needed. The installation of an innovation requires a level of state wide effort and support which is far in excess of the effort and support expended in the awareness, demonstration and field-test activities. Without that level of effort the innovation is more likely to join the vast pool of "good ideas" which never change actual practice in the schools.

To that end, the state level agency should develop appropriate materials and installation procedures designed to accomplish the installation of the criteria. Using these materials and procedures, they should:

A. Conduct and evaluate installation procedures in those field test sites where field test results indicate a relatively high probability of successful installation.
B. Revise the criteria and/or evaluation plan based on the results of these initial installation procedures
C. Inform the various audiences about the revisions and the reasons for these revisions
D. Continue to broaden the installation audience and repeat the revision and installation activities detailed in 4.B. and 4.C. above
E. Inform the various audiences about the final revisions and the reasons for these revisions

Example: Working with local school districts and the twelve field test managers, the state level agency develops a three year installation plan. Using the revised field test materials and activities and the cadre of twelve field test managers, the state level agency carries out the installation plan, revising the materials and activities as appropriate. Periodic newsletters report the progress of installation activities to the awareness, demonstration, field test and installation audiences. Newsletters contain such items as: examples of criterion application, student case studies and information on successful adaptations.

5. Institutionalize the Criteria

Contrary to popular opinion, the institutionalization decision rests not with the State, but rather with the individual student, teacher, secondary school and local school district. The State can, of course, require compliance with the criteria and require evidence of that compliance. However, whether or not the criteria become part of the "warp and woof" of the daily lives of students depends on whether or not the criteria are seen as proper, useful, feasible and accurate by those most directly impacted by these criteria.

To that end, the State should:

A. Encourage and support local adaptations of the criteria and/or evaluation plan where these adaptations seem clearly in the best interests of all concerned
B. Evaluate the results of these adaptations
C. Incorporate successful adaptations
D. Continue this adaptation/evaluation/incorporation process for the duration.

Example: During and after the three year installation process, the evaluation plan is revised and a "final" evaluation plan is presented at a state-wide meeting of

> vocational educators. The twelve field test managers continue as resource people for local school districts to assist in the local adaptation process and to insure that these adaptations are appropriate. The newsletter continues to report the results of evaluation activities. Exemplary school districts receive student scholarship awards, teacher incentive grants and additional, non-categorical vocational funding. Less exemplary but conforming districts are offered financial incentives to continue to improve their evaluation activities. Non-conforming districts are required to file a detailed plan for correction and are subject to on-site, state monitoring of correction plan implementation. Nonconforming districts which fail to submit an acceptable plan for correction abrogate their right to locally-directed program evaluation and are subject to full evaluation by the state level agency. (Note: The sample sanctions for nonconforming districts do not include a reduction in funding. Such reductions usually result in a lowering of program quality which, in turn, results in lowering the quality of education for boys and girls.)

With systematic and persistent attention to the institutionalization process, the State may look forward to forming cooperative relationships with LEAs and other stakeholders toward using evaluation to improve the quality of vocational/technical education for youth.

APPENDIX A

Bibliography

Abramson, Theodore, Tittle, Carol, & Cohen, Lee (1979). Handbook of Vocational Education Evaluation. Beverly Hills, CA: Sage Publications.

Asche, F. Marion (1986). The Researcher's Role in the Renewal of Vocational Education. Journal of Vocational Education Research, 11 (1), 1-14.

Baker, Eva L. (1979). New Directions in Evaluation Research: Implications for Vocational Education. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Baldridge, J. Victor & Deal, Terrence (Eds.). (1983). The Dynamics of Organizational Change in Education. Berkeley, CA: McCutchan.

Bennis, Warren G., Benne, Kenneth D., & Chin, Robert (1984). The Planning of Change (Fourth Edition). New York, NY: Holt, Rinehart and Winston.

Bottoms, Gene (1983). The Federal Role in Vocational Education (American Vocational Association position paper delivered before the Senate Subcommittee on Education, Art, and the Humanities).

Brannon, Donald R. (1985). Toward Excellence in Secondary Vocational Education: Using Evaluation Results. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Braskamp, Larry A., & Brown, Robert D. (Eds.). (1980). New Directions for Program Evaluation: Utilization of Evaluative Information. San Francisco, CA: Jossey-Bass.

Buttram, Joan, Kershner, Keith, Rioux, Steven, & Dusewicz, Russel (1987). An Evaluation of Competency-based Vocational Education in Pennsylvania: Five Years Later. Journal of Vocational Education Research, 12 (4), 35-55.

Campbell, Paul B., & Panzano, Phyllis (1985). Toward Excellence in Secondary Vocational Education: Elements of Program Quality. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Christian, Nancy K. (Ed.). (1982). Education in the 80's: Vocational Education. Washington, DC: National Education Association.

Clodi, Dennis R., & Jacobson, John (1989). The Future and America's Schools. The School Administrator, 46, (4), 15-16, 18.

Colorado State Board for Community Colleges and Occupational Education (n.d.). Quality Vocational Program Review and Improvement: Local Assessment of Vocational Programs. Denver, CO: Author.

Copa, George et al. (1986). Purposes of Vocational Education in Secondary Schools of Minnesota: Some Insights from Current Practice. St. Paul, MN: Minnesota Research and Development for Vocational Education, University of Minnesota.

Cory, Edward D. & Rokusek, H. (1982). A process for Vo-Ed Teachers. School Shop, 41 (9), 45-56.

Darcy, Robert L. (1979). Vocational Education Outcomes: Perspectives for Evaluation. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Darcy, Robert, Bolland, K., & Farley, J. (1979). Vocational Education Outcomes. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Drewes, Donald W. (1978). Outcome Standardization for Compliance or Direction: The Critical Distinction. In Floyd L. McKinney (Ed.), Interpreting Outcome Measures in Vocational Education, Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Drewes, Donald W. (1982). Productivity Workshop Plan. Washington, DC: Office of Vocational and Adult Education, U.S. Department of Education.

Edington, Everett D., & Cruikshank, Kathleen (1979). Synthesis of Evaluation Programs in Vocational Education at the National Level and in Wisconsin. Madison, WI: Wisconsin Vocational Studies Center.

Education and Jobs for Indiana's Future: A Long-range State Plan for a Comprehensive Vocational Education Program in Indiana. (1988). Indianapolis, IN: Indiana Commission on Vocational and Technical Education.

Educational Laboratories and R & D Centers (1976). Educational Dissemination and Linking Agent Sourcebook. Washington, DC: The National Institute of Education.

Ellis, Mary L. (1975). A Report to The Nation on Vocational Education. College Park, MD: Ellis Associates.

Elson, Donald E., & Strickland, Deborah C. (1988). Vocational Education Evaluation in Virginia: VEEVA Handbook, 1989-90. Richmond, VA: Vocational and Adult Education, Virginia Department of Education.

Elson, Donald E., & Strickland, Deborah C. (1988). Vocational Education Evaluation in Virginia: VEEVA Summary Report, 1988-89. Richmond, VA: Vocational and Adult Education, Virginia Department of Education.

Ertel, Kenneth, & Neveu, F. (1987). Vocational Education Research Planning. Journal of Vocational Education Research, 12 (3), 1-17.

Farley, Joanne, McKinney, Floyd, Kohan, Alan, Smith, Michael, & Pratzner, Frank (1985). Reconceptualization of Vocational Education Program Evaluation. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Farley, Joanne (1979). Vocational Education Outcomes: A Thesaurus of Outcome Questions. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Finn, Chester E., Jr. (1986). A Fresh Option for the Non-College-Bound. Kappan, 68 (4), 234-238.

Florida Department of Education (1988). Occupational Identifier Project Legislative Report, April 1988. Tallahassee, FL: Author.

Florida Department of Education (1988). Florida Education and Training Placement Information Program: Discussion Paper. Tallahassee, FL: Author.

Florida Department of Education (1988). Vocational Education Instructional Program Review: Program Criteria - Program Capability. Tallahassee, FL: Author.

Frantz, Nevin R. Jr. (1975). Inservice Education for Individualizing Instruction in Multioccupational Programs. Theory Into Practice, 14 (1), 32-38.

Frasier, James R. (1983). An Analysis of State Systems for Evaluating Handicapped and Disadvantaged Vocational Education Programs and Services (Thesis for Certificate of Advance Study). VT: University of Vermont.

Freeman, Howard E., & Solomon, Marian A. (Eds.). (1981). Evaluation Studies Review Annual: Volume 6. Beverly Hills, CA: Sage Publications.

Georgia Department of Education (1988). Assessment Guide For Secondary Programs of Vocational Education (Volume I, II, and III). Atlanta, GA: Author.

Glass, Gene V. (1977). Standards and Criteria, Kalamazoo, MI: Evaluation Center, Western Michigan University.

The William T. Grant Foundation Commission on Work, Family and Citizenship (1988). The Forgotten Half: Non-College Bound Youth in America. Kappan, 69 (6), 408-414.

Grasso, John T. (1979). Impact Evaluation in Vocational Education: The State of the Art. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Grasso, John T., & Shea, John R. (1979). Vocational Education and Training: Impact on Youth (a technical report for the Carnegie Council on Policy Studies in Higher Education). Berkeley, CA: The Carnegie Council.

Guba, E. G., & Lincoln, Y. S. (1981). Effective Evaluation. San Francisco, CA: Jossey-Bass.

Hall, Gene E. (1979). The Concerns-based Approach to Facilitating Change. Educational Horizons, 57 (4), 202-208.

Hall, Gene E., & Loucks, Susan (1978). Teacher Concerns as a Basis for Facilitating and Personalizing Staff Development. Teachers College Record, 80 (1), 36-53.

Havelock, Ronald G., Huber, Janet, & Zimmerman, Shaindel (1969). Major Works on Change in Education: Annotated Bibliography. Ann Arbor, MI: Center for Research on Utilization of Scientific Knowledge, The University of Michigan.

Herr, Edwin L. (1976). The Emerging History of Career Education: A Summary View. Washington, DC: National Advisory Council for Career Education, U.S. Office of Education.

Hull, William L. (1987). Comprehensive Model for Planning and Evaluating Secondary Vocational Education Programs in Georgia. Atlanta, GA: Georgia State Department of Education.

Hull, William L., Kester, Ralph J., & Martin, William B. (1973). A Conceptual Framework for the Diffusion of Innovations in Vocational and Technical Education. Columbus, OH: The Center for Vocational and Technical Education, The Ohio State University.

Hull, William L, & Kester, Ralph J. (1978). Empirical Dimensions of Innovation Adaptation, Viewpoints in Teaching and Learning, 54 (2), 71-89. (From Current Index to Journals in Education, 1979, VII, EJ187714).

Hull, William L. (1975). Installing Innovations via Inservice Education. Theory Into Practice, 14 (1), 43-48.

Hull, William L. et al. (1983). R & D Impact Criteria for Improving Vocational Education Programs. Washington, DC: Office of Vocational and Adult Education, U.S. Department of Education.

Hull, William L. (1974). Research and Development Stages (unpublished).

Illinois State Board of Education (1988). The State Plan for Implementing Education for Employment in Illinois, Fiscal Years 1989-1990. Springfield, IL: Author.

Jennings, John (1978). Evaluating Vocational Education: A Congressional Perspective. In Floyd L. McKinney (Ed.), Interpreting Outcome Measures in Vocational Education. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

The Joint Committee on Standards for Educational Evaluation (1988). The Personnel Evaluation Standards: How to Assess Systems for Evaluating Educators. Newbury Park, CA: Sage Publications.

The Joint Committee on Standards for Educational Evaluation (1981). Standards for Evaluations of Educational Programs, Projects, and Materials. New York, NY: McGraw-Hill.

Kadamus, James A., & Daggett, Willard R. (1986). New Directions for Vocational Education at the Secondary Level. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Kievit, Mary B. (1978). Perspectivism in Choosing and Interpreting Outcome Measures in Vocational Education. In Floyd L. McKinney (Ed.), Interpreting Outcome Measures in Vocational Education. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Klitze, Elizabeth, Hirsch, Kathleen, & Lowery, Cheryl (1988). Secondary Vocational Program Evaluation Project: Vocational Evaluation Manual, 1988-89. Menomonie, WI: Center for Vocational, Technical and Adult Education.

Leske, Gary, & Persico, John Jr. (1984). Indicators of Quality in Cooperative Vocational Education: A Review and Synthesis of Research, St. Paul, MN: Minnesota Research and Development Center for Vocational Education, Minnesota University.

Lewis, Morgan V., & Pratzner, Frank C. (1984). Perspectives on Vocational Education: Purposes and Performance. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Lewis, Morgan V. (1983). Recent Research on Labor Market Outcomes of Secondary Vocational Education. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Lindeman, Anne (1984). State Concerns in the Future Development of Vocational Education. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Lindquist, Jack (1978). Strategies for Change. Berkeley, CA: Pacific Soundings Press.

Lippitt, Ronald, Watson, Jeanne, & Westley, Bruce (1958). The Dynamics of Planned Change. New York, NY: Harcourt, Brace & World.

Lotto, Linda (1986). Expectations and Outcomes of Vocational Education: Match or Mismatch. Journal of Vocational Education Research, 11 (1), 41-60.

Lozier, G. Gregory, & Covert, Jerry (1982). A Strategy for Promoting Educational Change. The Journal of General Education, 34 (3), 198-209.

Madaus, George F., Scriven, Michael S., & Stufflebeam, Daniel L. (Eds.). 1983. Evaluation Models: Viewpoints on Educational and Human Services Evaluation. Boston, MA: Kluwer-Nijhoff.

Mahajan, Vijay, & Peterson, Robert A. (1985). Models for Innovation Diffusion. Beverly Hills, CA: Sage Publications.

Martin, Marilyn (1980). A Framework for Identifying Information for Evaluation Planning. Kalamazoo, MI: The Evaluation Center, Western Michigan University.

Maryland State Advisory Council on Vocational-Technical Education. 14th Report (1983). Baltimore, MD: Maryland Advisory Council on Vocational-Technical Education.

McCaslin, N. L., & Newton, M. (1977). An Evaluation of Three Communication Mechanisms Utilized by the Cashmere Program, Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

McCaslin, N. L. (1985). Considerations for Improving Local Program Evaluation. The Agricultural Education Magazine, 58 (2), 4-6.

McCaslin, N. L., & Lave, Janice (1976). Needs Assessment and Career Education: An Approach for States. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

McKinney, Floyd L., Farley, Joanne, Smith, Michael, Kohan, Alan, & Pratzner, Frank (1985). Critical Evaluation for Vocational Education. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

McKinney, Floyd L. (1978). Interpreting Outcome Measures in Vocational Education. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

McKinney, Floyd, & Mannebach, A. (1970). Performance Objectives: Foundation for Evaluation. Agricultural Education Magazine, 42 (12), 301-302.

McKinney, Floyd, & Fornash, Patricia (1983). Selected Evidence Supporting or Rejecting Eighteen Outcomes for Vocational Education. Washington, DC: Office of Vocational and Adult Education, U.S. Department of Education.

Michigan State Plan for Vocational Education, 1988-89/1989-90. (1988). Lansing, MI: Michigan State Board of Education.

Miquel, Richard J. (1985). Education and Employment: Where We Are and Where We Ought to Go. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Mitzel, Harold E. (Ed.). (1982). Encyclopedia of Educational Research (5th ed., vol. 4). New York: Free Press.

Morrish, Ivor (1976). Aspects of Educational Change. New York, NY: John Wiley & Sons.

Moser, Alta G. (1983). Summary and Implications of Dissemination and Utilization Activities: Five Year Report. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

The National Center for Research in Vocational Education (1987). Questions Frequently Asked About Vocational Education, Columbus, OH: Author.

National Commission on Secondary Vocational Education (1984). The Unfinished Agenda: The Role of Vocational Education in the High School. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

National Study of Secondary School Evaluation (1978) (5th ed.). Evaluative Criteria. Washington, DC: Author.

Nevo, David (1983). The Conceptualization of Educational Evaluation: An Analytical Review of the Literature. Review of Educational Research, 53 (1), 117-128.

Newton, Fred E. et al. (1983). Planning for Progress: Evaluating and Planning for Vocational Education in Oregon, Portland, OR: Multnomah County Education Service District.

North Carolina State Board of Education (1988). North Carolina State Plan for Vocational Education, Fiscal Years 1988-89 and 1989-90. Raleigh, NC: Author.

Nowakowski, Jeri, Bunda, Mary Anne, Working, Russell, Bernacki, Gerald, & Harrington, Phillip (1984). A Handbook of Educational Variables: A Guide to Evaluation. Boston, MA: Kluwer-Nijhoff.

Nowakowski, Jeri R. (1982). Standard Setting: The Crucial Issues. Evaluation and Program Planning, 5, 1-9.

Ohio Council on Vocational Education (1988). Opportunities Unlimited: Vocational-Technical Education in Ohio (Nineteenth Annual Report). Westerville, OH: Author.

Oregon State Department of Education (1988). Oregon State Plan for the Administration of Vocational Education Under PL 98-524, 1989 and 1990. Salem, OR: Author.

Parnell, Dale (1985). The Neglected Majority. Washington, DC: Community College Press.

Pfeiffer, Jay J. (1989). Status Report - The Florida Education Training Placement Information Program. Tallahassee, FL: Florida Department of Education.

Phelps, L. Allen and Hughes, Ruth P. (1986). The Unfinished Agenda: Some Implications for Research in Vocational Education. Journal of Vocational Education Research, 11, (2), 51-72.

Phi Delta Kappa National Study Committee on Evaluation (1971). Educational Evaluation and Decision Making. Itasca, IL: F.E. Peacock.

Poister, Theodore H. (1982). Performance Monitoring in the Evaluation Process. Evaluation Review, 6, (5), 601-623.

Pratzner, Frank, & Russell, J. (1983). The Roles and Functions of Vocational Education: Some Current Perspectives. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Public Law 217 - 1987 Indiana General Assembly: An Act To Amend the Indiana Code Concerning Vocational Education (Senate Enrolled Act No. 228). Indianapolis, IN: State of Indiana.

Public Law 97-300-October 13, 1982-97th Congress: An Act to Provide for a Job Training Program. Washington, DC: U.S. Government Printing Office.

Public Law 98-524 - October 19, 1984 - 98th Congress: An Act to Amend the Vocational Education Act of 1963 (Carl D. Perkins Act). Washington, DC: U.S. Government Printing Office.

Pucel, David J., & Khaak, William (1975). Individualizing Vocational and Technical Instruction. Columbus, OH: Charles E. Merrill.

Resnick, Daniel P., & Resnick, Lauren B. (1985). Standards, Curriculum and Performance: A Historical and Comparative Perspective. Educational Researcher, 14 (4), 5-20.

Russell, Earl, & Hull, William (1969). A Review and Analysis of Selected Criteria for State by State Comparisons of the Administration of Vocational-Technical Education. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Schmidt, B. June, Lynch, Richard, and Frantz, Nevin (1988). An Analysis of Priorities for Vocational Education Research and Development. The Journal of Vocational Education Research, 13 (2), 3-18.

Shepard, Lorrei A. (1977). A Checklist for Evaluating Large-Scale Assessment Programs. Kalamazoo, MI: Evaluation Center, Western Michigan University.

Silberman, Harry F. (1983). Determining Goals for Vocational Education. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

1988-89 South Carolina Vocational Education Mini-plan: Progress Report. (1988). Columbia, SC: State Department of Education.

Starr, Harold (1978). Developing State Plans for Vocational Education. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Starr, Harold (1986). Increasing Vocational Program Relevance: A Data-based Approach. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

State Plan for The Administration of Vocational Education in Ohio: July 1, 1988-June 30, 1990. Columbus, OH: Ohio Department of Education.

State Plan for Vocational Education in North Dakota, FY 1989-1990. (1988). Bismarck, ND: State Board for Vocational Education.

Stephens, Nancy F. (1980). Evaluation Guidelines and Practices for State Advisory Councils. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Stern, Jacob (1980). Concepts in Curriculum Related to Productivity. In James Leach (Ed.), Productivity in the Workforce: A Search for Perspectives. Urbana-Champaign, IL: Office of Vocational Education Research, University of Illinois.

Stevenson, William W. (1979). Vocational Education Evaluation: Problems, Alternatives, Recommendations. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Strickland, Deborah, & Asche, F. Marion (1987). Enhancing Utilization: A Proposal for a Modified Utilization Focused Model for Vocational Education Evaluation. The Journal of Vocational Education Research, 12 (4), 13-34.

Stufflebeam, Daniel L., & Shinkfield, Anthony J. (1984). Systematic Evaluation: A Self-Instructional Guide to Theory and Practice. Boston, MA: Kluwer-Nijhoff.

Suchman, Edward A. (1967). Evaluative Research. New York, NY: Russell Sage Foundation.

Venn, Grant (1978). Criteria Against Which Vocational Education Should Be Held Accountable. In Floyd L. McKinney (Ed.), Interpreting Outcome Measures in Vocational Education. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Walker, Reagan (1989). '2 + 2' Vocational Programs Drawing Attention of State, U.S. Policy Makers. Education Week, 8 (25), 25.

Weber, James M., & Puleo, Nancy F. (1988). Dynamics of Secondary Programs Assisted Under the Carl D. Perkins Act. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Wentling, Tim L., & Barnard, Wynette (1986). An Analysis of Perceived Emphasis on Vocational Education Outcomes. Journal of Vocational Education Research, 11 (4), 81-94.

Wentling, Tim L., Roegge, Chris A., Klit, John A., & McMillan, Virginia (1989). A Contemporary Evaluation System for Vocational Education in Illinois. Springfield, IL: Department of Adult, Vocational and Technical Education, Illinois State Board of Education.

Wentling, Tim (1980). Evaluating Occupational Education & Training Programs. Boston, MA: Allyn & Bacon.

Wentling, T. L., & Barnard, W. S. (1982). A Study of State Evaluation Practices in Vocational Education. Journal of Vocational Education Research, 7 (3), 42-54.

Wentling, Tim L. (1985). Toward Excellence in Secondary Vocational Education: Implementing Standards. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Wilms, Wellford W. (1984). Vocational Education and Job Success: The Employer's View. Kappan, 66, (4), 347-350.

Wisconsin Board of Vocational, Technical and Adult Education (1988). Opportunities Through Vocational, Technical and Adult Education in Wisconsin's Technical Colleges. Madison, WI: Author.

Wisconsin Board of Vocational, Technical and Adult Education (1989). VTAE FACTS. Madison, WI: Author.

Wisconsin Department of Public Instruction, Bureau for Vocational Education (1989). Wisconsin Vocational Education Program Standards Handbook (revised). Madison, WI: Author.

1987-88 Wisconsin State Statutes: Chapter 38, Vocational, Technical and Adult Education. (1988). Madison, WI: Wisconsin State Assembly.

Worthen, Blaine R., & Sanders, James R. (1987). Educational Evaluation: Alternative Approaches and Practical Guidelines. New York, NY: Longman.

Worthington, Robert M. (1983). Vocational Education in the United States: Retrospect and Prospect. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

APPENDIX B

Selected References

Baldridge, J. Victor & Deal, Terrence (Eds.). (1983). The Dynamics of Organizational Change in Education. Berkeley, CA: McCutchan.

Bennis, Warren G., Benne, Kenneth D., & Chin, Robert (1984). The Planning of Change (Fourth Edition). New York, NY: Holt, Rinehart and Winston.

Bottoms, Gene (1983). The Federal Role in Vocational Education (American Vocational Association position paper delivered before the Senate Subcommittee on Education, Art, and the Humanities).

Brannon, Donald R. (1985). Toward Excellence in Secondary Vocational Education: Using Evaluation Results. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Braskamp, Larry A., & Brown, Robert D. (Eds.). (1980). New Directions for Program Evaluation: Utilization of Evaluative Information. San Francisco, CA: Jossey-Bass.

Buttram, Joan, Kershner, Keith, Rioux, Steven, & Dusewicz, Russel (1987). An Evaluation of Competency-based Vocational Education in Pennsylvania: Five Years Later. Journal of Vocational Education Research, 12 (4), 35-55.

Campbell, Paul B., & Panzano, Phyllis (1985). Toward Excellence in Secondary Vocational Education: Elements of Program Quality. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Clodi, Dennis R., & Jacobson, John (1989). The Future and America's Schools. The School Administrator, 46, (4), 15-16, 18.

Colorado State Board for Community Colleges and Occupational Education (n.d.). Quality Vocational Program Review and Improvement: Local Assessment of Vocational Programs. Denver, CO: Author.

Copa, George et al. (1986). Purposes of Vocational Education in Secondary Schools of Minnesota: Some Insights from Current Practice. St. Paul, MN: Minnesota Research and Development for Vocational Education, University of Minnesota.

Darcy, Robert L. (1979). Vocational Education Outcomes: Perspectives for Evaluation. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Darcy, Robert, Bolland, K., & Farley, J. (1979). Vocational Education Outcomes. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Drewes, Donald W. (1978). Outcome Standardization for Compliance or Direction: The Critical Distinction. In Floyd L. McKinney (Ed.), Interpreting Outcome Measures in Vocational Education, Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Drewes, Donald W. (1982). Productivity Workshop Plan. Washington, DC: Office of Vocational and Adult Education, U.S. Department of Education.

Edington, Everett D., & Cruikshank, Kathleen (1979). Synthesis of Evaluation Programs in Vocational Education at the National Level and in Wisconsin. Madison, WI: Wisconsin Vocational Studies Center.

Education and Jobs for Indiana's Future: A Long-range State Plan for a Comprehensive Vocational Education Program in Indiana. (1988). Indianapolis, IN: Indiana Commission on Vocational and Technical Education.

Educational Laboratories and R & D Centers (1976). Educational Dissemination and Linking Agent Sourcebook. Washington, DC: The National Institute of Education.

Ellis, Mary L. (1975). A Report to The Nation on Vocational Education. College Park, MD: Ellis Associates.

Elson, Donald E., & Strickland, Deborah C. (1988). Vocational Education Evaluation in Virginia: VEEVA Handbook, 1989-90. Richmond, VA: Vocational and Adult Education, Virginia Department of Education.

Elson, Donald E., & Strickland, Deborah C. (1988). Vocational Education Evaluation in Virginia: VEEVA Summary Report, 1988-89. Richmond, VA: Vocational and Adult Education, Virginia Department of Education.

Ertel, Kenneth, & Neveu, F. (1987). Vocational Education Research Planning. Journal of Vocational Education Research, 12 (3), 1-17.

Farley, Joanne, McKinney, Floyd, Kohan, Alan, Smith, Michael, & Pratzner, Frank (1985). Reconceptualization of Vocational Education Program Evaluation. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Farley, Joanne (1979). Vocational Education Outcomes: A Thesaurus of Outcome Questions. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Finn, Chester E., Jr. (1986). A Fresh Option for the Non-College-Bound. Kappan, 68 (4), 234-238.

Florida Department of Education (1988). Occupational Identifier Project Legislative Report, April 1988. Tallahassee, FL: Author.

Florida Department of Education (1988). Florida Education and Training Placement Information Program: Discussion Paper. Tallahassee, FL: Author.

Florida Department of Education (1988). Vocational Education Instructional Program Review: Program Criteria - Program Capability. Tallahassee, FL: Author.

Frantz, Nevin R. Jr. (1975). Inservice Education for Individualizing Instruction in Multioccupational Programs. Theory Into Practice, 14 (1), 32-38.

Georgia Department of Education (1988). Assessment Guide For Secondary Programs of Vocational Education (Volume I, II, and III). Atlanta, GA: Author.

The William T. Grant Foundation Commission on Work, Family and Citizenship (1988). The Forgotten Half: Non-College Bound Youth in America. Kappan, 69 (6), 408-414.

Grasso, John T., & Shea, John R. (1979). Vocational Education and Training: Impact on Youth (a technical report for the Carnegie Council on Policy Studies in Higher Education). Berkeley, CA: The Carnegie Council.

Guba, E. G., & Lincoln, Y. S. (1981). Effective Evaluation. San Francisco, CA: Jossey-Bass.

Hall, Gene E. (1979). The Concerns-based Approach to Facilitating Change. Educational Horizons, 57 (4), 202-208.

Hall, Gene E., & Loucks, Susan (1978). Teacher Concerns as a Basis for Facilitating and Personalizing Staff Development. Teachers College Record, 80 (1), 36-53.

Havelock, Ronald G., Huber, Janet, & Zimmerman, Shaindel (1969). Major Works on Change in Education: Annotated Bibliography. Ann Arbor, MI: Center for Research on Utilization of Scientific Knowledge, The University of Michigan.

Hull, William L. (1987). Comprehensive Model for Planning and Evaluating Secondary Vocational Education Programs in Georgia. Atlanta, GA: Georgia State Department of Education.

Hull, William L., Kester, Ralph J., & Martin, William B. (1973). A Conceptual Framework for the Diffusion of Innovations in Vocational and Technical Education. Columbus, OH: The Center for Vocational and Technical Education, The Ohio State University.

Hull, William L, & Kester, Ralph J. (1978). Empirical Dimensions of Innovation Adaptation, Viewpoints in Teaching and Learning, 54 (2), 71-89. (From Current Index to Journals in Education, 1979, VII, EJ187714).

Hull, William L. (1975). Installing Innovations via Inservice Education. Theory Into Practice, 14 (1), 43-48.

Hull, William L. (1974). Research and Development Stages (unpublished).

Illinois State Board of Education (1988). The State Plan for Implementing Education for Employment in Illinois, Fiscal Years 1989-1990. Springfield, IL: Author.

The Joint Committee on Standards for Educational Evaluation (1988). The Personnel Evaluation Standards: How to Assess Systems for Evaluating Educators. Newbury Park, CA: Sage Publications.

The Joint Committee on Standards for Educational Evaluation (1981). Standards for Evaluations of Educational Programs, Projects, and Materials. New York, NY: McGraw-Hill.

Kadamus, James A., & Daggett, Willard R. (1986). New Directions for Vocational Education at the Secondary Level. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Klitze, Elizabeth, Hirsch, Kathleen, & Lowery, Cheryl (1988). Secondary Vocational Program Evaluation Project: Vocational Evaluation Manual, 1988-89. Menomonie, WI: Center for Vocational, Technical and Adult Education.

Leske, Gary, & Persico, John Jr. (1984). Indicators of Quality in Cooperative Vocational Education: A Review and Synthesis of Research, St. Paul, MN: Minnesota Research and Development Center for Vocational Education, Minnesota University.

Lewis, Morgan V., & Pratzner, Frank C. (1984). Perspectives on Vocational Education: Purposes and Performance. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Lindeman, Anne (1984). State Concerns in the Future Development of Vocational Education. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Lindquist, Jack (1978). Strategies for Change. Berkeley, CA: Pacific Soundings Press.

Lippitt, Ronald, Watson, Jeanne, & Westley, Bruce (1958). The Dynamics of Planned Change. New York, NY: Harcourt, Brace & World.

Lotto, Linda (1986). Expectations and Outcomes of Vocational Education: Match or Mismatch. Journal of Vocational Education Research, 11 (1), 41-60.

Lozier, G. Gregory, & Covert, Jerry (1982). A Strategy for Promoting Educational Change. The Journal of General Education, 34 (3), 198-209.

Madaus, George F., Scriven, Michael S., & Stufflebeam, Daniel L. (Eds.). 1983. Evaluation Models: Viewpoints on Educational and Human Services Evaluation. Boston, MA: Kluwer-Nijhoff.

Mahajan, Vijay, & Peterson, Robert A. (1985). Models for Innovation Diffusion. Beverly Hills, CA: Sage Publications.

Martin, Marilyn (1980). A Framework for Identifying Information for Evaluation Planning. Kalamazoo, MI: The Evaluation Center, Western Michigan University.

Maryland State Advisory Council on Vocational-Technical Education. 14th Report (1983). Baltimore, MD: Maryland Advisory Council on Vocational-Technical Education.

McCaslin, N. L., & Newton, M. (1977). An Evaluation of Three Communication Mechanisms Utilized by the Cashmere Program, Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

McCaslin, N. L. (1985). Considerations for Improving Local Program Evaluation. The Agricultural Education Magazine, 58 (2), 4-6.

McCaslin, N. L., & Lave, Janice (1976). Needs Assessment and Career Education: An Approach for States. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

McKinney, Floyd L. (1978). Interpreting Outcome Measures in Vocational Education. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

McKinney, Floyd, & Fornash, Patricia (1983). Selected Evidence Supporting or Rejecting Eighteen Outcomes for Vocational Education. Washington, DC: Office of Vocational and Adult Education, U.S. Department of Education.

Michigan State Plan for Vocational Education, 1988-89/1989-90. (1988). Lansing, MI: Michigan State Board of Education.

Miquel, Richard J. (1985). Education and Employment: Where We Are and Where We Ought to Go. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Mitzel, Harold E. (Ed.). (1982). Encyclopedia of Educational Research (5th ed., vol. 4). New York: Free Press.

Morrish, Ivor (1976). Aspects of Educational Change. New York, NY: John Wiley & Sons.

Moser, Alta G. (1983). Summary and Implications of Dissemination and Utilization Activities: Five Year Report. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

The National Center for Research in Vocational Education (1987). Questions Frequently Asked About Vocational Education, Columbus, OH: Author.

National Commission on Secondary Vocational Education (1984). The Unfinished Agenda: The Role of Vocational Education in the High School. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Nevo, David (1983). The Conceptualization of Educational Evaluation: An Analytical Review of the Literature. Review of Educational Research, 53 (1), 117-128.

Newton, Fred E. et al. (1983). Planning for Progress: Evaluating and Planning for Vocational Education in Oregon, Portland, OR: Multnomah County Education Service District.

North Carolina State Board of Education (1988). North Carolina State Plan for Vocational Education, Fiscal Years 1988-89 and 1989-90. Raleigh, NC: Author.

Nowakowski, Jeri, Bunda, Mary Anne, Working, Russell, Bernacki, Gerald, & Harrington, Phillip (1984). A Handbook of Educational Variables: A Guide to Evaluation. Boston, MA: Kluwer-Nijhoff.

Nowakowski, Jeri R. (1982). Standard Setting: The Crucial Issues. Evaluation and Program Planning, 5, 1-9.

Ohio Council on Vocational Education (1988). Opportunities Unlimited: Vocational-Technical Education in Ohio (Nineteenth Annual Report). Westerville, OH: Author.

Oregon State Department of Education (1988). Oregon State Plan for the Administration of Vocational Education Under PL 98-524, 1989 and 1990. Salem, OR: Author.

Pfeiffer, Jay J. (1989). Status Report - The Florida Education Training Placement Information Program. Tallahassee, FL: Florida Department of Education.

Phi Delta Kappa National Study Committee on Evaluation (1971). Educational Evaluation and Decision Making. Itasca, IL: F.E. Peacock.

Poister, Theodore H. (1982). Performance Monitoring in the Evaluation Process. Evaluation Review, 6, (5), 601-623.

Pratzner, Frank, & Russell, J. (1983). The Roles and Functions of Vocational Education: Some Current Perspectives. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Public Law 217 - 1987 Indiana General Assembly: An Act To Amend the Indiana Code Concerning Vocational Education (Senate Enrolled Act No. 228). Indianapolis, IN: State of Indiana.

Public Law 97-300-October 13, 1982-97th Congress: An Act to Provide for a Job Training Program. Washington, DC: U.S. Government Printing Office.

Public Law 98-524 - October 19, 1984 - 98th Congress: An Act to Amend the Vocational Education Act of 1963 (Carl D. Perkins Act). Washington, DC: U.S. Government Printing Office.

Silberman, Harry F. (1983). Determining Goals for Vocational Education. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

1988-89 South Carolina Vocational Education Mini-plan: Progress Report. (1988). Columbia, SC: State Department of Education.

Starr, Harold (1978). Developing State Plans for Vocational Education. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Starr, Harold (1986). Increasing Vocational Program Relevance: A Data-based Approach. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

State Plan for The Administration of Vocational Education in Ohio: July 1, 1988-June 30, 1990. Columbus, OH: Ohio Department of Education.

State Plan for Vocational Education in North Dakota, FY 1989-1990. (1988). Bismarck, ND: State Board for Vocational Education.

Stephens, Nancy F. (1980). Evaluation Guidelines and Practices for State Advisory Councils. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Stevenson, William W. (1979). Vocational Education Evaluation: Problems, Alternatives, Recommendations. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Strickland, Deborah, & Asche, F. Marion (1987). Enhancing Utilization: A Proposal for a Modified Utilization Focused Model for Vocational Education Evaluation. The Journal of Vocational Education Research, 12 (4), 13-34.

Stufflebeam, Daniel L., & Shinkfield, Anthony J. (1984). Systematic Evaluation: A Self-Instructional Guide to Theory and Practice. Boston, MA: Kluwer-Nijhoff.

Venn, Grant (1978). Criteria Against Which Vocational Education Should Be Held Accountable. In Floyd L. McKinney (Ed.), Interpreting Outcome Measures in Vocational Education. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Walker, Reagan (1989). '2 + 2' Vocational Programs Drawing Attention of State, U.S. Policy Makers. Education Week, 8 (25), 25.

Wentling, Tim L., & Barnard, Wynette (1986). An Analysis of Perceived Emphasis on Vocational Education Outcomes. Journal of Vocational Education Research, 11 (4), 81-94.

Wentling, Tim L., Roegge, Chris A., Klit, John A., & McMillan, Virginia (1989). A Contemporary Evaluation System for Vocational Education in Illinois. Springfield, IL: Department of Adult, Vocational and Technical Education, Illinois State Board of Education.

Wentling, T. L., & Barnard, W. S. (1982). A Study of State Evaluation Practices in Vocational Education. Journal of Vocational Education Research, 7 (3), 42-54.

Wentling, Tim L. (1985). Toward Excellence in Secondary Vocational Education: Implementing Standards. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Wilms, Wellford W. (1984). Vocational Education and Job Success: The Employer's View. Kappan, 66, (4), 347-350.

Wisconsin Board of Vocational, Technical and Adult Education (1988). Opportunities Through Vocational, Technical and Adult Education in Wisconsin's Technical Colleges. Madison, WI: Author.

Wisconsin Board of Vocational, Technical and Adult Education (1989). VTAE FACTS. Madison, WI: Author.

Wisconsin Department of Public Instruction, Bureau for Vocational Education (1989). Wisconsin Vocational Education Program Standards Handbook (revised). Madison, WI: Author.

1987-88 Wisconsin State Statutes: Chapter 38, Vocational, Technical and Adult Education. (1988). Madison, WI: Wisconsin State Assembly.

Worthen, Blaine R., & Sanders, James R. (1987). Educational Evaluation: Alternative Approaches and Practical Guidelines. New York, NY: Longman.

Worthington, Robert M. (1983). Vocational Education in the United States: Retrospect and Prospect. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

APPENDIX C

Resource People

Dr. Marion Asche, Professor
Vocational and Technical Education Division
Virginia Polytechnic Institute and State University
Blacksburg, Virginia

Dr. Donald Brannon, Director
Program Improvement and Evaluation
Division of Vocational Education
North Carolina Department of Public Instruction
Raleigh, North Carolina

Dr. Steven Chambers, Librarian
Center on Education & Training for Employment
The Ohio State University
Columbus, Ohio

Mrs. Marlene Dobberfuhl, Data Collection Supervisor
Division of Vocational Education
Wisconsin Department of Public Instruction
Madison, Wisconsin

Dr. Donald Elson, Co-Director
Vocational Education Evaluation in Virginia (VEEVA)
Virginia Polytechnic Institute and State University
Blacksburg, Virginia

Dr. Roy Gieals, Director
Evaluation Bureau
Division of Vocational and Technical Education
Florida Department of Education
Tallahassee, Florida

Dr. Curtis Kingsley, Director
Division of Secondary Vocational Programs
Georgia Department of Education
Atlanta, Georgia

Dr. John Klit, Manager of Program Approval
Department of Adult, Vocational & Technical Education
Illinois State Board of Education
Springfield, Illinois

Mr. John Kroll, Executive Assistant
Wisconsin Board of Vocational, Technical & Adult Education
State of Wisconsin
Madison, Wisconsin

Dr. John McKenzie, Senior Associate
Vocational Education Resource Center
Michigan State University
East Lansing, Michigan

Dr. Meg Murphy, Director
Program Improvement and Evaluation
Division of Vocational Education
North Carolina Department of Public Instruction
Raleigh, North Carolina

Dr. Tom Owens, Senior Associate
Education and Work Division
Northwest Regional Educational Laboratory
Portland, Oregon

Dr. Jay Pfeiffer, Program Administrator
Florida Education and Training Placement Information Program
Florida Department of Education
Tallahassee, Florida

Dr. Dick Ray, Director
Vocational Program
Division of Vocational and Technical Education
Florida Department of Education
Tallahassee, Florida

Ms. Maggie Rogers, Director
Information Center
Northwest Regional Educational Laboratory
Portland, Oregon

Mr. Keith Ruzicka, Publications Librarian
The Vocational Studies Center
University of Wisconsin-Madison
Madison, Wisconsin

Dr. Gregory Smith, Coordinator of Institutional Research & Evaluation
Department of Planning, Research and Evaluation
Colorado Community College and Occupational Education System
Denver, Colorado

Dr. Tim Wentling, Director
Office of Vocational Education Research
College of Education
University of Illinois
Champaign, Illinois

APPENDIX D

Consultant Vita

RESUME

William L. Hull

1295 Castleton Road
Columbus, OH 43220
Business: (614) 486-3655
Home: (614) 451-9365

SUMMARY:

Area of Professional Specialty:	Evaluation, educational change and innovation diffusion.
Background and Expertise in:	Research, development, and teacher education

Education: B.S. in Education and M.S. in Journalism from the University of Illinois; Ed.D. in Agricultural Education from Penn State University.

PROFESSIONAL EXPERIENCES:

Senior Research Specialist, The National Center for Research in Vocational Education, Columbus, Ohio; and Professor, Department of Agricultural Education, The Ohio State University, July 1969 - present.

Current responsibilities include directing a project to develop a comprehensive planning and evaluation model for secondary vocational education in Georgia and serving as a research specialist on a major project to describe secondary vocational programs nationwide. Other projects conducted as a staff member at the National Center include the following:

- Conducted impact assessments of National Center products and services.
- Evaluated nine industry-based adult literacy programs for skills needed by the American work force.
- Conducted a national needs assessment for a professional organization of proprietary schools.
- Managed commissioned papers on critical topics, such as, "Human Capital Development," "Providing Job Training," and "Using Evaluation Results."
- Developed evaluation criteria for assessing the impact of vocational education research and development products.
- Developed a handbook for formulating change strategies.

- Assisted in developing a model for adult career intake, assessment, exploration, decision making, and planning.

- Managed a nationwide resource and referral service for eight regional educational laboratories.

The current committee assignment is as an elected member of the Promotion and Tenure Committee, Department of Agricultural Education. Other assignments have been the following:

- Research Committee, Department of Agricultural Education

- Academic Affairs Committee, Department of Agricultural Education

- Chairman, Phi Delta Kappa Regional Leadership Conference

- Chairman, Winterset Public School Survey Committee

- Chairman, Program of Work, New and Related Services Division, Ohio Vocational Association

The current instructional assignment is a graduate course entitled "Change Strategies in Vocational Education", College of Education, The Ohio State University. Other instructional assignments have been the following:

- "Research Methods in Home Economics," College of Home Economics, The Ohio State University

- Methods in Teaching Agriculture, "College of Agriculture, The Ohio State University.

Technical assistance has been provided to a wide variety of agencies and organizations. A few are listed below:

- A workshop entitled "Taking Charge of Change" was conducted for the Region 8 State Directors' Conference, July 1986.

- A review of the extension services and two vocational-technical schools was provided to the Instituto de Capacitation y Productividad, Guatemala C.A., January 1982.

- Consultation was provided to the Rural School Project, Michigan State University.

- A workshop was conducted for the Region 4 EPDA fellows on the topic of "Developing Change-Agent Competencies in Administrators of Vocational Education."

- Consultation was provided to the Florida Department of Education on product dissemination strategies.

- A workshop on "Factors Affecting Education Change" was offered through the North Carolina Association for Research in Education.

- A summer conference program was provided to post-secondary vocational educators in Wisconsin on the subject of "The Impact of Research on Vocational Education."

American Vocational Association Presessions have been a popular avenue for sharing technical expertise. Some of the presessions conducted have been the following:

- "The Interpretation and Utilization of Research Findings by Local Agency Personnel"

- "Fundamentals of Research Design"

- "Change Advocacy in a Non-Rational System"

Assistant and Associate Professor, Oklahoma State University, July 1965 - June 1969.

Duties included graduate instruction in research design, advising dissertation research, serving on the University Honors Council, and directing an Agricultural Occupations Institute, a U.S. Office of Education funded project to develop and promote agribusiness programs in 13 states.

Graduate Research Associate; The Pennsylvania State University; September 1962 - June 1965. (Part time)

Responsibilities included the conduct of a research study financed by the Farm Credit Banks of Baltimore. Curriculum materials were developed, tested, and disseminated to vocational agriculture teachers in a five-state area.

Graduate Extension Editor; University of Illinois; June 1961 - August 1962. (Part time)

Responsibilities included meeting with local Future Farmers of America reporters, reporting statewide events, developing a newsletter, and writing articles for the College of Agriculture extension specialists.

Teacher; Freeburg Community High School; Freeburg, Illinois; June 1958 - June 1961.

Duties involved instructing adults and high school students in animal science, plant science, agricultural mechanics, and leadership development. As local FFA chapter advisor, many home-related and community-related activities were supervised, including the use of school property as a demonstration farm.

HONORS AND AWARDS:

Most Outstanding Symposium, "Writing Summaries of Qualitative Data from Diverse Settings," American Vocational Association annual convention, 1982.

Visiting Scholar to advise on educational dissemination problems, the Far West Laboratory, San Francisco, California, July 1978.

Visiting Professor, Center for Career Studies, California State University at Long Beach, July 1976.

Visiting Professor, Department of Occupational Education, Southern Illinois University, July 1972.

Graduated with Honors, University of Illinois, June 1958.

PUBLICATIONS/PRESENTATIONS:

A list of 100 publications, papers, and presentations, are available upon request.

HONORS AND AWARDS:

Most Outstanding Symposium, "Writing Summaries of Qualitative Data from Diverse Settings," American Vocational Association annual convention, 1982.

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- Chairman, Phi Delta Kappa Regional Leadership Conference
- Chairman, Winterset Public School Survey Committee
- Chairman, Program of Work, New and Related Services Division, Ohio Vocational Association

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Technical assistance has been provided to a wide variety of agencies and organizations. A few are listed below:

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RESUME

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SUMMARY:

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PROFESSIONAL EXPERIENCES:

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Current responsibilities include directing a project to develop a comprehensive planning and evaluation model for secondary vocational education in Georgia and serving as a research specialist on a major project to describe secondary vocational programs nationwide. Other projects conducted as a staff member at the National Center include the following:

- Conducted impact assessments of National Center products and services.
- Evaluated nine industry-based adult literacy programs for skills needed by the American work force.
- Conducted a national needs assessment for a professional organization of proprietary schools.
- Managed commissioned papers on critical topics, such as, "Human Capital Development," "Providing Job Training," and "Using Evaluation Results."
- Developed evaluation criteria for assessing the impact of vocational education research and development products.
- Developed a handbook for formulating change strategies.

N. L. McCASLIN

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Department of Agricultural Education
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EDUCATION:

Ph.D., Agricultural Education, Iowa State University, 1970
M.S., Agricultural Education, University of Nebraska-Lincoln, 1968
B.S., Agricultural Education, University of Nebraska-Lincoln, 1959

PROFESSIONAL EXPERIENCE:

Associate Professor: Department of Agricultural Education, The Ohio State University, March 1988 to present.

Teach graduate courses on evaluation, planning, and policy analysis. Conduct evaluation activities to determine impact of extension education programs. Supervise beginning and student teachers. Conduct research on the longitudinal effects of education programs. Serve on the graduate studies and the promotion and tenure committees. Advise graduate students in vocational, agricultural, and extension education, and write proposals for outside funding.

Associate Director: The National Center for Research in Vocational Education, The Ohio State University, August 1978 to March 1988.

Planned and directed the activities of the Evaluation and Policy Division with a budget of over two million dollars and a staff of approximately forty individuals. Responsible for administering and managing all planning, evaluation, and policy analysis projects. Conducted planning, evaluation and policy analysis activities in the United States and abroad. Other duties included communicating with other university and National Center administrators, contacting individuals in agencies outside the university, and writing grant proposals.

Associate Professor/Assistant Professor: Department of Agricultural Education, The Ohio State University, July 1971 to March 1988.

Taught graduate courses on vocational education, planning and evaluation, advised graduate students, served on departmental committees, served as a member of the graduate faculty (Level III). Granted tenure effective July 1, 1977.

Senior Research Specialist/Research Specialist: The National Center for Research in Vocational Education, The Ohio State University, July 1971 to August 1978.

Conducted and coordinated evaluation research, development, and technical assistance projects. Conducted training activities related to planning and evaluation of vocational education in the United States and abroad.

Research and Evaluation Coordinator: Career Education Division, Iowa Department of Public Instruction, August 1970 to June 1971.

Administered and supervised research and exemplary activities for the State of Iowa. Established research and exemplary priorities in vocational education for the state, wrote guidelines and established procedures for submitting proposals for funding. Consulted with individuals and agencies wishing to submit proposals for funding. Reviewed proposals and made recommendations to the state board for funding.

Consulted with public secondary schools, community colleges, and area vocational-technical schools on curriculum matters in vocational-technical education. Reviewed all new and revised secondary and postsecondary curricula in vocational-technical education and made recommendations to the state board of approval.

Research Fellow: Department of Agricultural Education, Iowa State University, June 1968 to August 1970.

Received U.S. Office of Education Research Training Fellowship. Developed curriculum materials for vocational education. Designed evaluation instruments, prepared data for processing, conducted statistical analyses, and developed instructional tests. Instructed teachers on teaching methods and techniques and served on department curriculum and seminar committees.

Vocational Agriculture Instructor: Franklin (Nebraska) Public Schools, January 1961 to June 1968.

Taught high school students and adult classes. Coordinated all vocational education programs for the school system. Supervised student teachers from the University of Nebraska. Selected as first runner-up in the Outstanding Young Educator competition sponsored by the Nebraska Jaycees. Active in numerous education, civic, and community organizations.

Training Officer: U.S. Army, Ft. Lee, Virginia, June 1960 to December 1960.

Administered and supervised training programs for the Quartermaster Training School. Developed military occupational specialty (MOS) proficiency tests.

Vocational Agriculture Instructor: Eagle (Nebraska) Consolidated Schools. July 1959 to June 1960.

Taught high school students and adult classes. Coordinated all vocational education for the school system.

HONOR SOCIETIES AND PROFESSIONAL ASSOCIATION MEMBERSHIPS:

Phi Delta Kappa
Phi Kappa Phi
Gamma Sigma Delta
Omicron Tau Theta
Ohio Vocational Association
American Vocational Association
American Vocational Education Research Association
American Education Research Association

SELECTED PRESENTATIONS:

"Vocational Education in the U.S.: Problems, Promises, and Potential." Vocational Initiatives Unit, University of Glasgow, Glasgow, Scotland, May 16, 1988.

"Questions Policy Makers Frequently Ask About Vocational Education." National Policy Seminar, American Vocational Association, Washington, DC, March 10, 1987.

"Major Priorities and Concerns Confronting Vocational Education: Present and Anticipated." National Association of State Directors of Vocational Education, Columbus, OH, February 2, 1987.

"Trends and Issues Affecting Vocational Education." Seminar for New State Vocational Education Directors, Columbus, OH, October 1, 1986.

"What are the Outcomes of Secondary Vocational Education?" Policy Seminar for the National Council on Vocational Education, Columbus, OH, October 1, 1986.

"Issues and Concerns in Planning and Evaluating Vocational Education." State Planners and Evaluators, American Vocational Association, Atlanta, GA, December 9, 1985.

"Update '85: A Workshop on Evaluation Strategies for State Councils of Vocational Education," Columbus, OH, July 23-24, 1985.

"A Non-Economists' View of Cost-Benefit Analysis." Central Ohio Chapter of the American Society for Training and Development, Columbus, OH, July 19, 1984.

"Increasing the Use and Impact of Policy Studies: A Researcher's Perspective." Invitational Policy Studies Forum. The National Academy of Sciences. Washington. DC. June 25. 1984.

"Examining the Process of Vocational Education." Pennsylvania Department of Education. Harrisburg. PA. June 5-6. 1984.

"Outcomes Associated with Participation in Secondary Vocational Education: A Synthesis of Recent Studies at the National Center for Research in Vocational Education." Oregon Council of Career and Vocational Administrators. Sunriver. OR. April 20. 1984.

"Outcomes Associated with Participation in Vocational Education: The United States Experience." Education, Youth, and Employment Conference. Jordanhill College of Education. Glasgow. Scotland. September 1983.

"Evaluation and Selection of Instructional Materials." Ohio Practical Nurse Instructor's Institute. Columbus. OH. May 6. 1983.

"School Effectiveness." West Virginia Vocational Education Administrator's Conference. Harpers Ferry. WV. May 2-3. 1983.

"Does Secondary Vocational Education Make a Difference in the Labor Market and Educational Experiences of High School Graduates?" Ohio Joint Vocational Schools Superintendents and Directors Meeting. Columbus. OH. February 17. 1983.

"Recent Findings on the Effects of Participating in Secondary Vocational Education." Directors of Secondary Vocational Education Meeting. Augusta. ME. January 19. 1983.

"What Are the Effects of Participating in Secondary Education?" Annual Convention of the American Vocational Association. St. Louis. MO. December 1982.

"Evaluating Vocational Education Programs." Departments of Vocational Education. Agricultural Education. and Home Economics Education Faculty and Graduate Students. Iowa State University. Ames. IA. February 1982.

"Using Paper and Pencil Tests in Evaluating Career Education." American Educational Research Association 1982 Annual Meeting. Los Angeles. CA. April 13-17. 1981.

"Measuring the Results of Career Education." National School Board Association 1981 Convention and Exposition. Dallas. TX. April 11-14. 1981.

"Using the New Career Education Measurement Series as a Vehicle for Improving Program Assessment." Third Annual Summer Conference of the American Association of School Administrators. Chicago. IL. July 6. 1980.

"Evaluating Practices in Education and Work: A New Look at the Relationship between School, Education, and Work." Second All-European Conference for Directors of Educational Research Institutions, Madrid, Spain, September 11-18, 1979.

"Program Evaluation in Vocational Education." Conference of Vocational Administrators and Supervisors, Texas A&M University, College Station, TX, March 22-25, 1977.

"Career Education Measurement Handbooks." National Institute of Education Forum on Career Education, San Francisco, CA, February 2-4, 1977.

"Performance Testing and Evaluation in Occupational Education." Workshop on Assessment and Evaluation, New Jersey Department of Education, Edison, NJ, December 14, 1976.

"Needs Assessment in Career Education." The U.S. Office of Education Commissioners National Conference on Career Education, Houston, TX, November 7-10, 1976.

"Instruments for Evaluating Local Vocational Programs." Thirtieth Annual Research Conference in Agricultural Education, Central Region, Columbus, OH, August 3-5, 1976.

"Evaluation of Career Education." Implementing Career Education: A National Conference for State Directors/Coordinators of Career Education, Council of Chief State School Officers, Phoenix, AZ, May 2-4, 1976.

"Evaluation of State Career Education Programs." Planning for Career Education: A National Conference for State Directors/Coordinators of Career Education, Council of Chief State School Officers, St. Petersburg, FL, November 12-14, 1975.

"Methods and Techniques of Evaluating the Impact of Research Coordination Units." Southwide Research Coordinating Council for Occupational Education, Lexington, KY, October 21, 1975.

"Evaluating Statewide Diffusion Networks." Developing Change-Agent Competencies in Administrators of Vocational Education, EPDA Region IV Inservice Education Program, Atlanta, GA, June 5, 1975.

"The Evaluator's Role in Planning Vocational Programs." Professional Development Workshop for Administrators of Vocational-Technical Education Programs in Large Urban Cities, Washington, DC, April 13-16, 1975.

"The Practitioner and Career Education." Career Education League Workshop, Ft. Dodge Community College, Ft. Dodge, IA, August 23, 1974.

"Program Evaluation." Sixth Annual National Leadership Development Seminar for State Directors of Vocational Education, Nashville, TN, September 18-21, 1973.

"Evaluating Your Local Career Education Program." Iowa Conference on Career Education, Ames, IA, April 1973.

"Impact Evaluation of Research and Development Products on Vocational and Technical Education." American Vocational Association, Chicago, IL, December 1-6, 1972.

"An Experimental Evaluation of the Effectiveness of Selected Techniques and Resources in Instruction in Vocational Agriculture." American Education Research Association, Minneapolis, MN, March 5, 1970.

PUBLICATIONS:

Review: *Summing Up: The Science of Reviewing Research*, by R. J. Light and D. P. Pillemer. *Journal of Industrial Teacher Education*, Vol. 24, No. 2, 1987, 5 pp.

"Considerations for Improving Local Program Evaluation." *The Agricultural Education Magazine*, Vol. 58, No. 2, August 1985, 3 pp.

A Preliminary Examination of Factors Related to Completion of College and University Agricultural Degrees by the High School Class of 1972. Columbus: The National Center for Research in Vocational Education, The Ohio State University, 1985, 89 pp. (with Debra D. Bragg).

"Outcomes Associated with Participation in Secondary Vocational Education: The United States Experience." *Education, Youth, and Employment*, edited by A. D. Weir and Brian Peck. Glasgow, Scotland: Jordanhill College of Education, 1984, 23 pp.

Review: *Workplace Perspectives on Education and Work*, by Peter B. Doeringer. *International Review of Education* (UNESCO Institute for Education), Vol. 29, No. 1, 1983, 2 pp. (Refereed).

"Demystifying Career Education Evaluation." in *Memo*, Vol. 2, No. 2, Summer 1981.

Preface: *Evaluating Occupational Education and Training Programs* by Tim L. Wentling. Boston: Allyn and Bacon, Inc., 1980.

"Evaluation Practices in Education and Work." In *A New Look at the Relationship Between School, Education, and Work*, collected and edited by M. Dino Carelli. Lisse, Netherland: Swets & Seitinger, 1980, 25 pp.

Career Education Measures: A Compendium of Evaluation Instruments. Columbus: The National Center for Research in Vocational Education, The Ohio State University, 1979, 354 pp. (with Charles J. Gross and Jerry P. Walker).

A Guide for Improving Locally Developed Career Education Measures. Columbus: The National Center for Research in Vocational Education, The Ohio State University, 1979. 52 pp. (with Jerry P. Walker).

"How to Improve Your Ratings." *VocEd*. Vol. 53, No. 9, December 1978, 2 pp.

Managing and Evaluating Career Education. Columbus: The National Center for Research in Vocational Education, The Ohio State University, 1978. 62 pp. (with Kay A. Adams).

"Analysis of Extant Data Bases in Vocational Education." In *Interpreting Outcome Measures in Vocational Education*, edited by Floyd L. McKinney, et al. Columbus: The National Center for Research in Vocational Education, The Ohio State University, 1978, 15 pp.

An Evaluation of Four Tests for the State Fair Community College Individualized Business and Office Education Programs. Columbus: The Center for Vocational Education, The Ohio State University, 1977, 110 pp.

An Evaluation of Three Communication Mechanisms Utilized by the Cashmere Career Education Program. Columbus: The Center for Vocational Education, The Ohio State University, 1977, 88 pp. (with Mark Newton).

The Development and Pilot Testing of Self-Review Instruments for Vocational Education Programs in Kentucky. Columbus: The Center for Vocational Education, The Ohio State University, 1976, 9 pp. (with Kay A. Adams).

Development of the Career Education Implementation Handbook. Columbus: The Center for Vocational Education, The Ohio State University, 1976, 83 pp. (with William L. Hull and Ralph J. Kester).

Career Education Implementation: A Handbook for Strategy Formulation. Columbus: The Center for Vocational Education, The Ohio State University, 1976, 148 pp. (with William L. Hull).

Kentucky Advisory Committee Evaluation System. Columbus: The Center for Vocational Education, The Ohio State University, 1976, 60 pp. (with Kay A. Adams).

An Evaluation of the Resource Development Unit of the Kentucky Bureau of Vocational Education. Columbus: The Center for Vocational Education, The Ohio State University, 1976, 70 pp. (with Kay A. Adams and Charles J. Gross).

Needs Assessment and Career Education: An Approach for States. Columbus: The Center for Vocational Education, The Ohio State University, 1976, 70 pp. (with Janice Lave).

An Evaluation of Four Tests for the J.C. Penney House Appliance Repair Training Program. Columbus: The Center for Vocational Education, The Ohio State University, 1976, 46 pp. (with Gary Morris).

"Evaluation of Special Needs Programs." In *Vocational Education for Special Groups*, 1976 AVA Yearbook, edited by James E. Wall. Washington, DC: American Vocational Association, 1976, 19 pp. (with Robert E. Norton).

Personnel Development and Training Guide, Volume I--Alphabetic Listing of Highway Traffic Safety Specific Functions, Objectives and Curriculum Materials. Columbus: The Center for Vocational Education, The Ohio State University, 1975, 495 pp. (with Sandra R. Orletsky and Valija M. Axelrod).

Personnel Development and Training Guide, Volume II--Workfield Listing of Highway Traffic Safety Specific Functions, Objectives and Curriculum Materials. Columbus: The Center for Vocational Education, The Ohio State University, 1974, 549 pp. (with Sandra R. Orletsky and Valija M. Axelrod).

Personnel Development and Training Guide, Volume III--All Manpower and Generic Functions, Objectives and Education and Training Programs for Highway Traffic Safety Personnel. Columbus: The Center for Vocational Education, The Ohio State University, 1975, 94 pp. (with Sandra R. Orletsky and Valija M. Axelrod).

Identification of Curriculum Materials and Correlation with Highway Traffic Safety Manpower Job Function--Final Report. Columbus: The Center for Vocational Education, The Ohio State University, 1975, 100 pp. (with Sandra R. Orletsky and Valija M. Axelrod).

An Evaluation of Six Tests for the J.C. Penney Home Appliance Repair Training Program. Columbus: The Center for Vocational Education, The Ohio State University, 1975, 53 pp. (with James M. Weber).

"Program Evaluation: Problems, Prerequisites, Characteristics, and Implementation," in *6th Annual National Leadership Development Seminar for State Directors of Vocational Education*, Daniel E. Koble, Editor. Columbus: The Center for Vocational Education, The Ohio State University, 1974, 9 pp.

An Assessment of the Impact of the Wisconsin Vocational Research Coordination Unit. Columbus: The Center for Vocational Education, The Ohio State University, 1974, 83 pp. (with John Walton).

An Evaluation of a Planning Study to Determine the Career Education Needs for Merged Area V of the State of Iowa. Fort Dodge: Iowa Central Community College, 1973, 20 pp. (with Ronald D. Daugherty).

The Impact of a Vocational Education Information Document: Cognitive, Affective, and Behavioral Effects. Columbus: The Center for Vocational Education, The Ohio State University, 1973, 103 pp. (with J. R. Walton).

Second Annual Report, the Territory of American Samoa Advisory Council on Vocational Technical Education. Pago Pago, American Samoa: The Territory of American Samoa Advisory Council on Vocational-Technical Education, 1972, 75 pp. (with Ronald D. Daugherty).

Experimental Evaluation of Field Trips on Instruction in Vocational Agriculture. Summary of a research project. Ames: Iowa State University, 1970, 13 pp.

Experimental Evaluation of Field Trips on Instruction in Vocational Agriculture. Ph.D. Dissertation. Ames: Iowa State University, 1970, 165 pp.

Animal Health. Instructional Bulletin. Ames: Department of Agricultural Education, Iowa State University, 1969, 87 pp.

Enrollment in Vocational Agriculture Related to Occupational Factors of Nebraska Male Farm High School Graduates. M.S. Thesis. Lincoln: University of Nebraska, 1968, 146 pp.

CONSULTANCIES:

Vocational Initiatives Unit, University of Glasgow, Scotland, 1988

National Association of State Directors of Vocational Education, Denver, CO, 1987

Oregon Department of Education, Salem, OR, 1984

Pennsylvania Department of Education, Harrisburg, PA, 1984

West Virginia Department of Education, Harpers Ferry, WV, 1983

Jordanhill College of Education, Glasgow, Scotland, 1983

Mexico Department of Labor and Social Services, Mexico, 1980

United Nations Economic, Scientific, and Cultural Organization, Institute for Education, Hamburg, Germany, 1979

State Fair Community College, Sedalia, MO, 1976

Region IV Vocational Education District, Bowling Green, KY, 1976

Wisconsin Department of Public Instruction, Madison, WI, 1976

Florida Division of Vocational Education, Tallahassee, FL, 1976

U.S. Office of Education, Washington, DC, 1975 and 1976

Council of Chief State School Officers, Washington, DC, 1975 and 1976

University of Maine, Bangor, ME, 1975

Mississippi State University, Region IV EPDA Workshop, Atlanta, GA, 1975

Washington Technical Institute, Washington, DC, 1975

Iowa Central Community College, Ft. Dodge, IA, 1973 and 1974
Shenandoah Public Schools, Shenandoah, IA, 1973

Iowa State University, Ames, IA, 1973

Vocational Education Advisory Council for American Samoa, Pago Pago, American Samoa, 1972

Institute for Education Development, New York, NY, 1972

FLOYD L. McKINNEY

CURRICULUM VITA-EXECUTIVE SUMMARY

SIGNIFICANT ACCOMPLISHMENTS BY FUNCTION

Management

- Initiated and used participative management techniques in university, research, and state government settings
- Provided leadership and supervision for diverse staff in universities, research organizations, and state department of education
- Developed short- and long-range program goals, budgets, staffing requirements, and staff evaluations
- Monitored program development, program implementation, and fiscal accounts
- Chaired university interdisciplinary education department
- Directed major division in state department of education
- Served as leader for program evaluation at national research center
- Initiated staff development programs in state department of education

Program Development

- Developed M.Ed and Ed.D programs in vocational education at Texas A&M University
- Developed graduate student internship program at Texas A&M
- Chaired statewide career education program development effort
- Developed statewide program evaluation process
- Developed proposal for a school within a college
- Developed and managed process for involving advisory groups in program management

Research

- Planned and conducted 28 national, state, and local research evaluation and development studies funded for over $2,500,000
- Used qualitative and quantitative methods in conducting studies
- Program leader for development of comprehensive national research center
- Served as project director for 24 research, evaluation, and development studies
- Served as chair of editorial board for refereed journal
- Served as research and evaluation consultant for a number of agencies/organizations

Teaching and Student Advisement

- Developed new graduate courses
- Taught graduate courses at Texas A&M University and The Ohio State University
- Advised doctoral students at Texas A&M University and The Ohio State University
- Developed student recruitment program at Texas A&M University
- Taught in secondary vocational education program and advised youth group

Publications and Presentations

- Presented over 30 papers, selected by peer review, at major professional meetings
- Presented over 15 invited papers at major professional meetings
- Served as principal author of over 20 refereed research publications

FLOYD L. McKINNEY

HOME ADDRESS

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OFFICE ADDRESS

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The Ohio State University
1960 Kenny Road
Columbus, Ohio 43210

(614) 486-3655

EDUCATION

Ph.D., Vocational Education (Higher Education and Instructional Technology), Michigan State University, 1969

Dissertation: *Citizens Perceptions and Professional Educators Expectations Regarding the Vocational Citizens Advisory Committee*

M.Ed., Agricultural Education (Educational Administration), University of Missouri-Columbia, 1966

B.S., Agricultural Education, University of Missouri-Columbia, 1959

PROFESSIONAL EXPERIENCE

Senior Research Specialist and Project Director, The National Center for Research in Vocational Education, The Ohio State University, 1978 - present

Adjunct Associate Professor of Agricultural Education, College of Agriculture, The Ohio State University, 1978 - present (Graduate Faculty)

Associate Professor and Coordinator of Interdisciplinary Education (Department Head for Graduate Programs in Vocational, Adult and Extension Education), Texas A&M University, 1977-1978 (Graduate Faculty)

Associate Professor and Coordinator, Vocational Education Programs, Texas A&M University, 1976-1977 (Graduate Faculty)

Director, Vocational Program Supporting Services Division, Kentucky Department of Education, 1972-1976. Included four Units: Curriculum Development, Occupational Information Utilization, Professional Personnel Development, and Resources Development (Research, Exemplary, and Dissemination). The Division averaged about thirty-two full-time professional staff members.

Assistant Professor, Department of Vocational Education and Research Specialist, Research Coordinating Unit for Vocational Education, University of Kentucky, 1969-1972 (Graduate Faculty)

Instructor, Michigan State University, 1966-1969

Research Assistant, University of Missouri-Columbia, 1965-1966

Teacher of Vocational Agriculture, Salisbury, Missouri, 1963-1965 and El Dorado Springs, Missouri, 1959-1963

HONOR SOCIETIES AND PROFESSIONAL ASSOCIATION MEMBERSHIPS

- Alpha Tau Alpha
- American Association of Teacher Educators in Agriculture
- American Educational Research Association
- American Evaluation Association
- American Vocational Association
- American Vocational Education Research Association
- Gamma Sigma Delta
- Ohio Vocational Association
- Omicron Tau Theta
- Phi Delta Kappa
- Phi Kappa Phi
- World Future Society

MANAGEMENT EXPERIENCE

Coordinator of Interdisciplinary Education at Texas A&M University. This Unit operated as one of the departments in the College of Education. Planned, budgeted, conducted, and evaluated functions normally assigned to a university department head. The department included graduate programs in vocational, adult, and extension education.

Division Director in the Kentucky State Department of Education. Planned, managed, and evaluated statewide programs for vocational education research, exemplary efforts, dissemination, management information systems, professional personnel development programs (including support of and coordination of graduate education programs in institutions of higher education), and curriculum development activities. Professional staff averaged about thirty-two full-time individuals.

Project Director. Managed the research and development activities at several different agencies and institutions with a wide range of management responsibilities associated with carrying out simple and complex research and development activities.

Program Director for Evaluation Studies at the National Center for Research in Vocational Education, The Ohio State University. Developed annual and long-range research and development plans for the National Center's program evaluation efforts. The program was staffed with individuals representing varying degrees of academic preparation and experience in several different disciplines. Developed proposals, carried out funded scopes of work, and assessed the quality of the efforts.

Conference and Workshop Coordinator. Identified professional personnel development needs in all of my jobs. These efforts have included initial needs assessment, planning, conducting, and evaluating a diverse array of programs, services, and activities for varied groups of individuals. The clientele and funding of these activities frequently included a combination of local, state, regional, and national levels.

PUBLICATIONS

Refereed

McKinney, Floyd L. and Farley, Joanne. "A Reconceptualization of Evaluation in Vocational Education," Under review for publication in the *Journal of Vocational Education Research.*

McKinney, Floyd L.; Fields, Ernie; and Kurth, Paula. *Factors Influencing the Success of Secondary/Postsecondary Vocational-Technical Education Articulation Programs.* Columbus: The National Center for Research in Vocational Education, The Ohio State University, (forthcoming, 1988).

McKinney, Floyd L. and Kurth, Paula. *Service Provider Selection, Client Transfers, and Resource Leveraging of the Ohio Education Coordination and Grants Program Funded by the Job Training Partnership Act.* Columbus: The National Center for Research in Vocational Education, The Ohio State University, 1987.

Parks, Marie; McKinney, Floyd L., and Mahlman, Robert. *Characteristics of Effective Secondary Vocational Education Programs for Special Populations.* Columbus: The National Center for Research in Vocational Education, The Ohio State University, 1987.

Axelrod, Valija M.; McKinney, Floyd L., and Parks, Marie. *Guidelines for Evaluating Secondary Vocational Education Programs for Special Populations.* Columbus: The National Center for Research in Vocational Education, The Ohio State University, 1987.

McKinney, Floyd L. *Instruments for Conducting A Self-Evaluation of Utah's Postsecondary Vocational Education Program.* Columbus: The National Center for Research in Vocational Education, The Ohio State University, 1986.

Starr, Harold and McKinney, Floyd L. *Improving Vocational Education in the Wicomico County School System.* Columbus: The National Center for Research in Vocational Education, The Ohio State University, 1986.

McKinney, Floyd L.; Farley, Joanne; Smith, Michael; Kohan, Alan; and Pratzner, Frank. *Critical Evaluation for Vocational Education.* Columbus: The National Center for Research in Vocational Education, The Ohio State University, 1985.

Farley, Joanne; McKinney, Floyd L.; Kohan, Alan; Smith, Michael; and Pratzner, Frank. *Reconceptualization of Vocational Education Program Evaluation.* Columbus: The National Center for Research in Vocational Education, The Ohio State University, 1985.

McKinney, Floyd L. (Ed.) *Strengthening Computer Technology Programs: Examples from Developing Institutions.* Columbus: The National Center for Research in Vocational Education, The Ohio State University, 1985.

McKinney, Floyd L.; Franchak, Stephen J.; Halasz, Ida M.; Morrison, Irene; and Fornash, Patricia. *Increasing Job Placement Rates in Vocational Programs: Secondary and Postsecondary.* Columbus: The National Center for Research in Vocational Education, The Ohio State University, 1985.

McKinney, Floyd L., and Fornash, Patricia G. "Evidence Supporting Selected Outcomes" in Lewis, Morgan V. and Pratzner, Frank C. (Eds.) *Perspectives on Vocational Education: Purposes and Performance.* Columbus: The National Center for Research in Vocational Education, The Ohio State University, forthcoming in 1985.

McKinney, Floyd L., and Fornash, Patricia. *Selected Evidence Supporting or Rejecting Eighteen Outcomes for Vocational Education.* Columbus: The National Center for Research in Vocational Education, The Ohio State University, 1983.

McKinney, Floyd L.; Franchak, Stephen J.; Halasz, Ida M.; Morrison, Irene; and Fornash, Patricia. *Factors Relating to the Job Placement of Former Postsecondary Vocational Education Students.* Columbus: The National Center for Research in Vocational Education, The Ohio State University, 1982.

McKinney, Floyd L.; Franchak, Stephen J.; Halasz-Salster, Ida; Morrison, Irene; and McElwain, Douglas. *Factors Relating to the Job Placement of Former Secondary Vocational Education Students.* Columbus: The National Center for Research in Vocational Education, The Ohio State University, 1981.

McKinney, Floyd L. *Avaliacao de Programas de Formacao Profissional: uma Revisao.* Traducao de Carlos Alberto Costa Pinto. Rio de Janeiro: Servico National de Aprendizagem Comercial Departamento Nacional, 1981.

McKinney, Floyd L., and Harvey, Beth (Eds.) *Viewpoints on Interpreting Outcome Measures in Vocational Education.* Columbus: The National Center for Research in Vocational Education, The Ohio State University, 1978.

McKinney, Floyd L.; Gray, Kenney E.; and Abram, Marie. *Interpreting Outcome Measures in Vocational Education.* Columbus: The National Center for Research in Vocational Education, The Ohio State University, 1978.

Gray, Kenney; Abram, Marie; and McKinney, Floyd L. *Vocational Education Measures: Instruments to Survey Former Students and Their Employers.* Columbus: The National Center for Research in Vocational Education, The Ohio State University, 1978.

McKinney, Floyd L. *Program Evaluation in Vocational Education: A Review.* ERIC/CE Information Analysis Series. Columbus: The National Center for Research in Vocational Education, The Ohio State University, 1977.

McKinney, Floyd L., and Greenwood, Katy. *Interpreting Vocational Education: Workshop Proceedings and Final Report.* College Station: Texas A&M University, 1977.

McKinney, Floyd L., and Mannebach, Alfred J. "Evaluating Educational Programs." *Bureau of School Service Bulletin.* Lexington: University of Kentucky, 1972.

McKinney, Floyd L., and Mannebach, Alfred J. *Final Report of the Central Kentucky Vocational Education Evaluation Project.* Frankfort: Kentucky Bureau of Vocational Education, 1972.

McKinney, Floyd L., Director, Monitor, Script Writer, and Narrator for a forty-minute color videotape and 16mm film on *Evaluating Programs of Vocational Education.* Produced by the University of Kentucky Television Center, 1971.

McKinney, Floyd L., and Mannebach, Alfred J. *Proceedings and Follow-up of a Workshop on Determining Performance Objectives.* Lexington: University of Kentucky, 1971.

McKinney, Floyd L., and Mannebach, Alfred J. *Evaluating MDTA Programs: Workshop Proceedings and Participant Follow-up.* Lexington: University of Kentucky, 1971.

McKinney, Floyd L., and Oglesby, Charles. *Developing and Conducting Follow-Up Studies of Former Students.* Lexington: University of Kentucky, 1971.

Byram, Harold M., and McKinney, Floyd L. *Evaluation of Local Vocational Education Programs.* East Lansing: Michigan State University, 1968.

Non-Refereed

McKinney, Floyd L., and Ballard, Mark R. *Evaluation of the Electronics Advanced Placement Implementation Process in the Community College of Rhode Island.* Warwick: Community College of Rhode Island, 1987.

McKinney, Floyd L., and Greenwood, Katy. *Resource Notebook for Interpreting Vocational Education.* College Station: Texas A&M University, 1977.

McKinney, Floyd L., and Sims, Norman. *Proceedings of a Series of Workshops on Writing Research and Development Proposals: A Final Report.* Frankfort: Kentucky State Department of Education, 1974.

McKinney, Floyd L., and Mannebach, Alfred J. "Let's Give Students Their Say." *American Vocational Journal* 49 (January 1974): 27-29.

McKinney, Floyd L., and Davis, B. Glen. "Kentucky VIEW on Trial: Assessment of a Vocational Guidance Tool." *American Vocational Journal* 49 (January 1974): 51-53.

McKinney, Floyd L., and Mannebach, Alfred J. *Study of Student Committees on Evaluation.* Lexington: University of Kentucky, 1971.

McKinney, Floyd L., and Mannebach, Alfred J. *Workshop Proceedings: Central Kentucky Vocational Education Evaluation Project.* Lexington: University of Kentucky, 1971.

McKinney, Floyd L. "Involvement of People is Critical in Maintaining Programs of High Standards." *The Agricultural Education Magazine* 44 (August 1971): 43-44.

McKinney, Floyd L., et al. *Central Kentucky Vocational Education Evaluation Project.* Lexington: University of Kentucky, 1970.

McKinney, Floyd L., and Mannebach, Alfred J. "Performance Objectives--Foundation for Evaluation." *The Agricultural Education Magazine* 42 (June 1970): 301-301.

McKinney, Floyd L. "The Operation and Functions of Citizens' Advisory Committees." *The Agricultural Education Magazine* 42 (April 1970): 264-65.

McKinney, Floyd L.; Mannebach, Alfred J.; and Neel, C. O. *Evaluating Programs of Vocational Education in Kentucky.* Frankfort: Kentucky State Department of Education, 1970.

McKinney, Floyd L. "Help From the Citizen Advisory Committee." *Michigan Vocational Agriculture Service Letter* 33 (May 1968): 5-6.

RESEARCH AND DEVELOPMENT ACTIVITIES

Project Director, *Alternative Design(s) for the Commonwealth of Pennsylvania's Delivery of a Comprehensive Articulated Program of Vocational Education.* Funded by the Pennsylvania Department of Education, 1988, $168,759. (Qualitative and quantitative inquiry)

Project Director, *Leadership Advancement Seminars.* Funded by the U.S. Department of Education, 1988, $87,000.

Project Director, *Technical Assistance on Developing Vocational Program Evaluation Efforts for the Houston, Texas Independent School District.* Funded by the Houston, Texas Independent School District, 1988, $4,998. (Qualitative inquiry)

Project Director, *Evaluation of the Ohio Education Coordination and Grants Program Funded by the Job Training Partnership Act.* Section 123 1(A) (1). Funded by the Ohio Department of Education, 1987, $50,000. (Qualitative inquiry)

Project Director, *Evaluation of "2 + 2" Program Outcomes.* Funded by the U.S. Department of Education, 1987, $140,000. (Qualitative and quantitative inquiry)

Project Director, *Evaluating Vocational Education Programs for Special Populations.* Funded by the U.S. Department of Education, 1986-87, $198,579. (Qualitative and quantitative inquiry)

Project Director, *Technical Assistance on Long-Range Plan for Vocational Education for the Memphis City Schools.* Funded by the Memphis, Tennessee City Schools, 1986, $5,645. (Qualitative inquiry)

Project Director, *Development of Self-Evaluation Instruments for Utah's Postsecondary Vocational Education Accrediation/Evaluation Program.* Funded by the Utah State Department of Education, 1986, $6,958. (Qualitative inquiry)

Project Director, *Technical Assistance for Dobyns-Bennett High School, Kingsport, Tennessee.* Funded by the Kingsport City Schools, 1986, $1,360. (Qualitative inquiry)

Field Investigator, *Evaluation of Vocational Education Programs for Incarcerated Adults in Ohio.* Funded by the Ohio Department of Education, 1986. (Qualitative inquiry)

Field Investigator, *Improving Vocational Education in the Wicomico County School System.* Funded by the Wicomico County Schools, Salisbury, Maryland, 1986. (Qualitative inquiry)

Project Director, *Design and Assessment of the Formative Evaluation of "Principles of Technology" Curriculum Materials.* Funded by the U.S. Department of Education, 1985, $75,029. (Qualitative inquiry)

Field Investigator, *An Assessment and Study of the Vocational Education Program in Fauquier County Virginia Public Schools.* Funded by Fauquier County Public Schools, 1985. (Qualitative inquiry)

Field Investigator, *Assessing Cooperative Vocational Education Students' Engaged Time at Work Sites.* Funded by the U.S. Department of Education, 1984. (Qualitative inquiry)

Project Director, *Reconceptualization of Evaluation.* Funded by the U.S. Department of Education, 1984, $173,922. (Qualitative inquiry)

Project Director, *Designated Study: Development of Policy Analysis Papers in Vocational Education.* Funded by the U.S. Department of Education, 1983, $198,568. (Qualitative inquiry)

Project Director, *Designated Study: Expanding the Capacity for Program Improvement in Developing Institutions (Title 3) and Historically Black Colleges that are Involved in Vocational Education.* Funded by the U.S. Department of Education, 1983, $104,754. (Qualitative inquiry)

Project Director, *Outcomes for Vocational Education.* Funded by the U.S. Department of Education, 1982, $160,390. (Qualitative inquiry)

Project Director, *Factors Affecting Job Placement in Vocational Education.* Funded by the U.S. Department of Education, 1979, 1980, 1981, $885,000. (Qualitative and quantitative inquiry)

Project Director, *Credibility of Vocational Education Evaluation Reports.* Funded by the U.S. Office of Education, 1978, $104,000. (Qualitative inquiry)

Project Director, *Interpreting Outcome Measures in Vocational Education.* Funded by the National Institute of Education, 1977-1978, $149,500. (Qualitative inquiry)

Project Director, *Workshop for Interpreting Vocational Education.* Funded by the U.S. Office of Education, 1976-1977, $68,000. (Qualitative inquiry)

Project Director, *An Evaluation of the Advisory Council for Technical-Vocational Education in Texas.* Funded by Texas Education Agency, 1977, $67,000. (Qualitative inquiry)

Project Director, *Goals of Vocational Education in Kentucky.* Funded by Kentucky Department of Education, 1974, $3,000. (Qualitative inquiry)

Project Director, *Study of Student Committees on Evaluation.* Funded by Kentucky Department of Education, 1971, $1,100. (Qualitative and quantitative inquiry)

Project Director, *Procedures and Techniques for Locally-Directed, State-Assisted Evaluation of Secondary and Postsecondary Programs of Vocational Education in the Central Kentucky Region.* Funded by Kentucky Department of Education, 1970-1972, $27,507. (Qualitative and quantitative inquiry)

Co-Director, *Workshop on Determining Performance Objectives.* Funded by Kentucky Department of Education, 1970, $6,786.

Co-Director, *Workshop on Evaluating MDTA Programs.* Funded by KentuckyDepartment of Education, 1970, $7,000.

PRESENTATIONS - SELECTED BY PEER REVIEW

McKinney, Floyd L. *Use of Small Group Processes as Critical Evaluation Strategies.* Paper selected for presentation at the Annual Meeting of the American Evaluation Association, New Orleans, 1988.

McKinney, Floyd L. *Evaluating Vocational Education Programs for Special Populations.* Paper selected for presentation at the Annual Meeting of the American Educational Research Association, Washington, D.C., 1987.

McKinney, Floyd L. and Ballard, Mark R. *Theoretical and Practical Considerations in Evaluating the Career Planning Functions of a University Career Services Office.* Symposium selected for presentation at the Annual Meeting of the American Evaluation Association, Boston, 1987.

McKinney, Floyd L. *Evaluating the Career Planning Functions in the Colleges of the Arts and Sciences: A Critical Approach.* Paper selected for presenta-tion at the Annual Meeting of the American Evaluation Association, Boston, 1987.

McKinney, Floyd L. *Evaluating Teacher Education Programs.* Commissioned Paper presented at the Invitational Colloquium, Sponsored by the Coordinating Committee on Research in Vocational Education, Washington, D.C. Disseminated nationally by the Case Institute for Research and Development in Occupational Education, City University of New York, 1986.

McKinney, Floyd L. *Excellence in Teacher Education: Evaluation Theory and Practice.* Symposium selected for presentation at the Annual Meeting of the American Association of Colleges for Teacher Education, Chicago, 1986.

McKinney, Floyd L. *Application of the Critical Evaluation Model in Teacher Education.* Paper selected for presentation at the Annual Meeting of the American Evaluation Association, Kansas City, 1986.

McKinney, Floyd L. *Application of the Critical Evaluation Model in Vocational Teacher Education Program Evaluation.* Paper selected for presentation at the Annual Meeting of the American Educational Research Association, San Francisco, 1986.

McKinney, Floyd L. *Excellence in Vocational Teacher Education: Evaluation Theory and Practice.* Symposium selected for presentation at the Annual Meeting of the American Educational Research Association, San Francisco, 1986.

McKinney, Floyd L. *Alternative Framework for Evaluating Vocational Education.* Symposium selected for presentation at the Joint Meeting of the Canadian Evaluation Society, Evaluation Network, and the Evaluation Research Society, Toronto, 1985.

McKinney, Floyd L. *Critical Evaluation: Proposal for An Alternative Framework for Evaluation of Vocational Education.* Paper selected for presentation at the Joint Meeting of the Canadian Evaluation Society, Evaluation Network, and the Evaluation Research Society, Toronto, 1985.

McKinney, Floyd L. *Issues in Using Critical Research and Evaluation in Vocational Education.* Symposium selected for presentation at the Research Section Meeting, American Vocational Association Annual Convention, Atlanta, 1985.

McKinney, Floyd L. *Gaining and Enhancing Stakeholder Participation.* Paper selected for presentation at the Annual Meeting of the American Vocational Association, Atlanta, 1985.

McKinney, Floyd L. *The Case Study Defined.* Paper selected for presentation at the Annual Meeting of the American Vocational Association, Atlanta, 1985.

McKinney, Floyd L. *Critical Evaluation for Vocational Education Programs.* Paper selected for presentation at the Research Section Meeting, American Vocational Association Annual Convention, New Orleans, 1984.

McKinney, Floyd L. *Alternative Paradigms for Evaluation Vocational Education Programs.* Symposium selected for presentation at the Research Section Meeting, American Vocational Association Annual Convention, New Orleans, 1984.

McKinney, Floyd L. *Critical Ingredients for Quality Vocational Education Programs.* Paper selected for presentation at the American Educational Research Association Annual Meeting, Montreal, 1983.

McKinney, Floyd L. *The Individual as Instrument.* Paper selected for presentation at the American Vocational Education Association Annual Convention, St. Louis, 1982.

McKinney, Floyd L., and Halasz, Ida. *Factors Relating to the Job. Placement of Former Secondary and Postsecondary Vocational Education Students.* Paper selected for presentation at the National Agricultural Education Research Meeting, St. Louis, 1982.

McKinney, Floyd L. *Selected Evidence Supporting Eighteen Outcomes for Vocational Education.* Paper selected for presentation at the American Vocational Education Association Annual Convention, St. Louis, 1982.

McKinney, Floyd L. Organizer and Presenter, Workshop, *Qualitative Methods for Conducting Research and Evaluating Community College Programs.* Selected for presentation at the Annual Convention of the American Association of Community and Junior Colleges, St. Louis, 1982.

McKinney, Floyd L. Conducted Workshop, *Vocational Education in Correctional Institutions: Evaluating for Program Improvement.* Sponsored by the National Academy for Vocational Education, Baltimore, 1982.

McKinney, Floyd L. Organizer and Major Presenter for Workshop, *New Methods for Vocational Education Research and Evaluation.* Sponsored by the National Academy for Vocational Education, Atlanta, 1981.

McKinney, Floyd L. *Factors that Affect the Job Placement of Secondary Vocational Education Students.* Paper selected for presentation at the Guidance Division, American Vocational Association Annual Convention, Atlanta, 1981.

McKinney, Floyd L. Organizer and Presenter, Symposium, *Qualitative Methods for Improving Program Evaluation in Vocational Education.* Symposium and paper selected for presentation at the Research Section Meeting, American Vocational Association Annual Convention, Atlanta, 1981.

McKinney, Floyd L. *Factors Affecting the Job Placement of Former Vocational-Technical Education Students.* Paper selected for presentation at the Research Section, American Vocational Association Annual Convention, Atlanta, 1981.

McKinney, Floyd L. *Factors Affecting Job Placement.* Paper selected for presentation at the Trade and Industrial Division, American Vocational Association Annual Convention, Atlanta, 1981.

McKinney, Floyd L. Organizer and Presenter, Forum, *Factors Affecting the Job Placement of Former Vocational-Technical Education Students.* Paper selected for presentation at the American Association of Community and Junior Colleges, Washington, D.C., 1981.

McKinney, Floyd L. *Factors Affecting the Job Placement of Former Secondary Vocational Education Students.* Paper selected for presentation at the American Association of Community and Junior Colleges, Washington, D.C., 1981.

McKinney, Floyd L. *Evaluating the Quality of Vocational Education Programs.* Paper selected for presentation at the Michigan Education Research Association Annual Convention, Dearborn, 1981.

McKinney, Floyd L. Organizer and Presenter, Symposium, *Naturalistic Inquiry As A Methodology for Evaluating Vocational Education Programs.* Symposium and paper selected for presentation at the American Vocational Association Annual Convention, Dallas, 1978.

McKinney, Floyd L. Organizer and Chairperson, Symposium, *Information Needs for Planning and Evaluating Programs of Vocational Education.* Symposium selected for presentation at the American Vocational Association Annual Convention, Atlanta City, December, 1977.

McKinney, Floyd L. *Use of Student Committees in Evaluating Vocational Education Programs.* Paper selected for presentation at the American Education Research Association Annual Convention, New Orleans, 1973.

McKinney, Floyd L. *Evaluating Programs of Vocational Education.* Paper selected for presentation at the American Vocational Association Annual Convention, Chicago, December, 1972.

PRESENTATIONS - INVITED

McKinney, Floyd L. *Strategies for Evaluating Statewide Programs of Vocational Education.* Invited paper presented at Workshop on Evaluation Strategies for Redesigning Vocational Education Programs, New Orleans, 1988.

McKinney, Floyd L. *Qualitative Research: Implications for Agricultural Education Research.* Invited paper selected for presentation at the National Agricultural Education Research Meeting, Las Vegas, December, 1987.

McKinney, Floyd L. *Evaluating Vocational Education Programs: A Look at the Framework.* Invited paper presented at Workshop on New Developments in Program Evaluation, Las Vegas, December, 1987.

McKinney, Floyd L. *Future Directions for Vocational-Technical Education.* Invited paper presented at Conference for Toll Fellows, the Council of State Governments, Lexington, Kentucky, August, 1987.

McKinney, Floyd L. *Evaluating Vocational Education Programs - A Look at the Framework.* Invited paper presented at the Conference on Evaluating for Quality and Effectiveness in the 1990's, Madison, Wisconsin, April, 1987.

McKinney, Floyd L. *Appropriate Outcomes for Secondary Vocational Education.* Invited Symposium on Vocational Education in the High School, American Education Research Association, SIG/Vocational Education, New Orleans, April, 1984.

McKinney, Floyd L. *Evaluating Vocational Education Programs on the Basis of Job Placement and Labor Market Supply and Demand.* Invited paper presented at the National Leadership Seminar for Administration of Vocational Education in Large Cities, Washington, D.C., March, 1977.

McKinney, Floyd L. *Supporting Services for Competency Based Vocational Education Programs.* Invited paper presented at the Southeastern Regional EPDA Workshop on Competency Based Vocational Education, April, 1976.

McKinney, Floyd L. *Evaluating Programs of Vocational Agriculture.* Invited paper presented at the Indiana Vocational Association Annual Conference, Indianapolis, Indiana, August, 1975.

McKinney, Floyd L. *Critical Issues Facing the Vocational Education Communicator.* Invited paper presented at the Annual conference of the National Association of Vocational-Technical Education Communicators, Louisville, Kentucky, 1975.

McKinney, Floyd L. *The Innovator's Challenge.* Invited paper presented at the Career Education Research Conference, Frankfort, Kentucky, May, 1975.

McKinney, Floyd L. *Management by Objectives.* Invited paper presented at the North Atlantic Regional Seminar and Research Conference on Agricultural Education, Storrs, Connecticut, November, 1974.

McKinney, Floyd L. *Management Information Systems.* Invited paper presented at the North Atlanta Regional Seminar and Research Conference on Agricultural Education, Storrs, Connecticut, November, 1974.

McKinney, Floyd L. *Developing Objectives for Research and Development Proposals.* Invited paper presented at two Workshops on Preparing Research and Development Proposals, Louisville and Lexington, Kentucky, Summer, 1974.

McKinney, Floyd L. *Using Advisory Committees in the Community College.* Invited paper presented at a meeting of the Professional Staff of the Ashland Community College, Ashland, Kentucky, August, 1974.

McKinney, Floyd L. *Management by Objectives for Connecticut's Regional Vocational Agriculture Centers.* Invited paper presented as Keynote Address at Workshop on Improving/Updating Administrative Techniques of Present and Potential Department Heads in Connecticut Regional Vocational Agriculture Centers, April, 1974.

SELECTED CONSULTANTSHIP AND PROFESSIONAL ACTIVITIES

Evaluator, Electronics Articulation Program, Community College of Rhode Island, Warwick, October, 1987.

Member, Program Planning Committee, Central Ohio Lung Association, Columbus, Ohio.

Chairperson of Editorial Board, *Journal of Vocational Education Research*, 1986.

Evaluation Review Team, *Planning Grant for National Center for Research in Vocational Education*, 1986-87.

Team Chair and Principal Author of Future Directions Section, Grant for the National Center for Research in Vocational Education, 1987.

Member of Editorial Board, *Journal of Vocational Education Research*, 1985-1987.

Advisory Panel Member for the Study, *Analysis of Offerings and Enrollments in Secondary Schools*, Conducted by Evaluation Technologies, Incorporated under contract with the National Center for Education Statistics, 1983-84.

Reviewer for the *Journal of Vocational Education Research*, *American Educational Research Journal*, and *Journal of Vocational and Technical Education*.

Evaluator of *Study on Women in Vocational Education*, Funded by the U.S. Office of Education, University of Kentucky, Lexington, June, 1979.

Evaluator for the *Florida Vocational Education Personnel Development System Project*, University of Central Florida, April, 1979.

Consultant on *Outcome Measures for Vocational Education*, The Center for Vocational Education, The Ohio State University, Columbus, 1978.

Accreditation Team, Tri-Cities State Regional Vocational-Technical School, Tennessee, Southern Association of Colleges and Schools, April, 1976.

Reviewer of *Research Report on Career Education Product Installation Guide*, The Center for Vocational Education, The Ohio State University, Columbus, January, 1976.

Reviewer of *Technical Plan Review for a Research Project*, The Center for Vocational Education, The Ohio State University, Columbus, January, 1976.

Author of Three Modules for the *Performance Based Vocational Teacher Education Project*, The Center for Vocational Education, The Ohio State University, Columbus, 1976.

Bureau Representative, Kentucky Bureau of Vocational Education--University Coordinating Committee (included representatives from Kentucky's eight public institutions of higher education) 1973-1976.

Reviewer, *Technical Plan for a Product Field Test, Vocational Development and Adjustment I: Career Planning Support System*. The Center for Vocational and Technical Education, The Ohio State University, Columbus, April 30, May 1 and 2, 1974.

Reviewer of *Paper on Professional Personnel Development*. The Center for Vocational and Technical Education, The Ohio State University, Columbus, 1973.

Consultant, *Management Information System for State Vocational Education Division*, The Ohio State University, 1972-1973.

Chairperson, Writing Team for *Kentucky Career Education Paper*. Team also responsible for planning and conducting a series of regional meetings to review the "Paper." 1973-1974.

SELECTED ACADEMIC RESPONSIBILITIES

Graduate Courses Taught at The Ohio State University

Program Planning and Development

Recent Developments in Qualitative Research

Policy and Policy Development in Vocational Education

Graduate Courses Taught at Texas A&M University

Principles of Vocational Education

Developing Curricula in Vocational Education

Seminar - Vocational Education

Program Development Activities at Texas A&M University

Developed Ed. D. Program in Vocational Education

Developed M.Ed. Program in Vocational Education

Prepared Proposal to Implement a Department of Vocational, Adult, and Extension Education

Developed Operating Procedures for Advisory Committee for Graduate Studies in Vocational Education

Initiated Advisory Committee for Graduate Studies in Vocational Education

Developed Guidelines for the Internship in Vocational Education

Planned and Conducted Meetings of the Graduate Faculty in Vocational, Adult, and Extension Education

Graduate Student Advisement

Doctoral students at Texas A&M University and at The Ohio State University

APPENDIX E

Project Personnel

Dr. Daniel L. Stufflebeam	Center Director
Ms. Mary E. Gourley	Principal Investigator
Dr. Robert N. Gourley	Center Staff
Dr. William L. Hull	Consultant
Dr. N.L. McCaslin	Consultant
Dr. Floyd L. McKinney	Consultant

Project Activities and Timeline

Task	Completion Date
Develop search specifications	February 15
Develop study design	February 20
Format final report contents	February 25
Conduct Computer searches	March 3
Conduct hand searches	March 8
Conduct telephone interviews	March 10
Collect consultant developed criteria	March 15
Collect and organize all documents	March 17
Review, analyze, and interpret documents	March 20
Draft and distribute findings	March 22
Validate findings	March 30
Conduct panel work session	March 30-31
Draft recommendations	April 3
Validate recommendations	April 4
Submit final report	April 12

APPENDIX F

Work Session Materials

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PHI DELTA KAPPA VOCATIONAL AND TECHNICAL EDUCATION EVALUATION PROJECT

WORK SESSION MATERIALS PACKET

Evaluation Center
Western Michigan University

March 1989

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First Draft of Bibliography

AGENDA

Thursday, March 30

8:30 a.m.	Coffee and Introductions Review of Agenda and Materials Packet Distribution of Day One Handouts
9:00 a.m.	Exercise #1 - Criterion Rating
11:45 a.m.	Lunch Break (Reservations in the Gold and Brown Room in Bernhard Center for noon)
1:00 p.m.	Exercise #2 - Selection of Organizers
2:00 p.m.	Break
2:30 p.m.	Exercise #2 (continued)
3:30 p.m.	Discussion of Day Two activities Setting the schedule for Day Two

Friday, March 31

8:30 a.m.	Coffee Distribution of Day Two Handouts
9:00 a.m.	Exercise #3 - Mapping the Field
11:00 a.m.	Lunch (Open)
1:00 p.m.	Exercise #4 - Completion of the Matrix
3:00 p.m.	Review of Activities and Recommendations for Reporting Project Results

OVERVIEW

A two day work session will be held on March 30 and 31, 1989 at the WMU Evaluation Center Conference Room on the 4th floor of Ellsworth Hall.

In preparation for the work session, participants are being asked to review the first draft of the attached Bibliography for comprehensiveness. If they discover any critical omissions, they are asked to contact The Evaluation Center before March 30 to provide the additional citations and, if possible, information as to where the document or book can be obtained.

The goal of this work session is to bring together recognized experts in the field of vocational education evaluation for the purpose of coming to consensus on answers to the following question.

> What outcomes should be used as criteria to evaluate secondary vocational and technical education programs, and why?

A series of tasks have been developed to assist in the accomplishment of this goal. They are described on the following pages.

TASKS - DAY ONE

Exercise #1 Criterion Rating

Participants will be provided with written sets of candidate outcomes for secondary programs, which have been compiled from a review of collected documents. In addition, participants will be provided with copies of two papers containing "idealized" sets of outcomes, developed by project consultants. Participants will read these materials for understanding. A discussion will follow in which Center staff will respond to any participant questions in regard to the written materials. Participants will then review the outcomes for comprehensiveness and may suggest the addition of outcomes they judge to be missing from the sets.

Participants will individually rate the finalized sets of candidate outcomes on the basis of the following questions.

1. How well does the outcome address the achievement of national goals, ideals or social values?
2. How well does the outcome speak to the needs of actual or potential clients?
3. How well does the outcome meet agreed upon standards or norms set by experts or other relevant groups?
4. Could this outcome be rewritten to improve its quality in regard to clarity, inclusiveness, and feasibility of application?

(See Attachment - "Recommendation for the Selection of Criteria")

Participants will share results of their ratings and come to consensus on the selection of a recommended set of outcomes to be used in Exercise #2.

In view of the size of the participant group, consensus will be reached by discussion and negotiation; a formal technique was judged to be inappropriate and unnecessary.

Exercise #2 Selection of Organizers

Participants will be provided with three alternative sets of organizers taken from a review of collected documents. For example, societal outcomes and student outcomes are the only two organizers found in some models.

Participants will individually judge the efficacy of the three alternative sets by matching each to a selected list of study findings. Participants will then select one of the three, or create a new set (by combining elements from one or more of the alternatives) which best represents their preferred set of organizers.

Participants will present their recommendations and their rationale for selection and come to consensus on the organizers to be used in Exercise #3. If consensus cannot be reached two alternative sets of organizers will be produced by this exercise.

TASKS - DAY TWO

Exercise #3 Mapping the Field

As a group, participants will subsume the selected outcomes from Exercise #1 under the set(s) of organizers selected in Exercise #2. Group decisions will be made as to the following.

1. Similar or redundant outcomes to be combined or eliminated;
2. Holes or gaps necessitating the inclusion of additional outcomes from the original candidate lists;
3. The elimination of organizers resulting from a lack of outcomes which fit the category; and/or
4. The addition of organizers under which selected outcomes could be logically subsumed.

Exercise #4 Completion of a Matrix of Recommended Criteria

As a group, participants will critique the matrix developed in Exercise #3. Judgments will be made orally as to completeness, internal integrity, usefulness to the intended audience(s) and feasibility of application.

Consensus will be reached regarding adoption or revision and participants will conclude the work session by jointly accepting the completed matrix.

LIST OF HANDOUTS

1.1 Consultant developed papers
1.2 Compiled outcomes recommended by recognized authorities
1.3 Compiled outcomes from selected states
1.4 Compiled outcomes reflecting current trends
1.5 Outcomes required by Federal legislation
1.6 Candidate outcomes rating form

2.1 Alternative Sets of organizers and their sources
2.2 Selected study findings from the literature

RECOMMENDATIONS FOR THE SELECTION OF CRITERIA

From his analytical review of educational evaluation, David Nevo (1983) has proposed the following for the selection of criteria to be used in the evaluation of educational programs and activities.

In general, he concluded that most evaluators agree that criteria must be determined within the specific context of the object (of the evaluation) and the function of the evaluation being conducted and that the criteria should be designed to achieve the stated goals of the object.

More specifically, he derived four primary questions to be asked in determining the value of criteria to be selected and cited the sources of these questions.

1. Does the criterion address the achievement of national goals, ideals or social values? (Guba and Lincoln 1981)
2. Does the criterion speak to the identified needs of actual or potential clients? (Joint Committee 1981)
3. Does the criterion meet agreed upon standards or norms set by experts or other relevant groups? (Eisner 1979, Stake 1967)
4. Is the criterion better than the quality of alternative criteria? (A variety of readings)

Nevo, David (1983). The Conceptualization of Educational Evaluation: An Analytical Review of the Literature, Review of Educational Research, 53 (1), 117-128.

HANDOUT 1.1

TWO SETS OF CRITERIA AND THEIR ORGANIZERS PROPOSED FOR PDK STUDY BY PROJECT CONSULTANTS

Dr. William L. Hull

and

Dr. N.L. McCaslin

The Evaluation Center
Western Michigan University

April 1989

Dr. N. L. McCaslin

Potential Evaluation Criteria for Assessing Local School Districts' Vocational and Technical Education Programs

Student Needs

Demographic Information
Basic Skills Achievement Level
Occupational Aspirations

Employer Needs

Employment Projections
Occupational Requirements

Program Delivery Processes

Organizational and Administrative Support
Mission and Goals Statement
Scope and Sequence
Relationship to Other Courses
Facilities and Equipment
Budget
Image
Counseling and Guidance Services
Internal Evaluation Processes
Instructor Qualifications
Community Involvement
Program Linkages
Safety

Program Outcomes

Labor Force Participation Rates
Wages
Type of Employment
Placement Rates
Satisfaction with Vocational and Technical Program
Employer Satisfaction with Vocational and Technical Students
Basic Skills Achievement Level
Problem Solving Ability
Occupational Competence Level
Graduation Rates
Postsecondary Educational Enrollment
Citizenship

EVALUATION CRITERIA FOR ASSESSING LOCAL EDUCATION AGENCY DELIVERY OF VOCATIONAL/TECHNICAL PROGRAMS

William L. Hull

A few caveats are in order before addressing the primary thrust of this paper. First, the criteria are written from a state department of education perspective. That is, the assessment may be made by an evaluation team visiting a local site. Or data may be collected by records transmitted by mail, computer, or otherwise on data forms from the local education agency to the state department.

Second, the criteria lend themselves to local direction and interpretation. The philosophy underlying this paper is one of local planning and evaluation. These criteria may be used by an independent school district to direct its own destiny. The criteria are compatible with local planning and state planning functions. Third, these criteria are stated in a rather generic fashion. Any state department of education or local school district will find it necessary to adjust them to mesh with local conditions and traditions.

Finally, the criteria may be said to be outcome orientated. Evaluators looking for evidence of program delivery and performance may be forced to view process criteria most of the time; however, these criteria contain the germ of product-based outcomes as students acquire competencies leading to employment. The laudable goals of a liberal arts education not withstanding, employability and employment are the "bottom line" expectations for most vocational/technical education program completers.

The author has drawn on his work as a research specialist and evaluator with the National Center for Research in Vocational Education since 1969. Most recently, he revised and developed on-site evaluation manuals for the Georgia Department of Education and served as a needs assessment consultant to the Washtenaw County Intermediate School District and the Clinton County Intermediate School District in Michigan. Many of the evaluation categories and criteria used in this paper are based on these experiences.

Underlying the framework for these criteria is the CIPP evaluation model applied to vocational/technical education. A page from one of the Georgia reports is appended to this paper. The model illustrates the outcomes focused orientation of the criteria and the interaction between the community and the school district so essential to high quality education.

The criteria are organized within three categories based on their application to local school districts. The categories are system criteria, school criteria, and program criteria. In the author's opinion, it is necessary to address school and system level concerns when evaluating the delivery of vocational-technical education programs.

System Criteria

In addition to the general management of the school district, system personnel must be concerned with specific criteria for the delivery of vocational/technical education programs.

Criteria

- A written philosophy of the school district refers to the purpose of vocational/technical education programs.
- The organization of the school district supports the efficient and effective administration of vocational/technical education programs.
- Clearly written and concise annual and long range plans provide direction for effective programs.

Comment

The local board members and administrators should provide evidence of programming to meet the occupational needs of all of their students. Their philosophy of how to do this should be documented and backed up by pragmatic actions at the school and classroom level. Conditions in school districts vary; it should not be the intent of the state department of education to dictate how vocational/technical education is delivered in the district. Local educators should be free to operate their programs efficiently and effectively in a manner deemed by them to be most appropriate. Coordination and planning at this level is essential for optimum use of resources. Evaluators should expect to find evidence of coordinated planning among departments, programs, and the community.

School Criteria

A school performs a unique function within an educational system. It brings together educational components deemed to be necessary for an effective educational experience. Thus, it is at the school level where program evaluation, community involvement, and guidance of students occurs most effectively.

Criteria

- o Community involvement in organized school activities is continuous and functional.
- o Comprehensive career guidance activities support the development of occupational potential among students through vocational/technical programs.
- o Program admission policies are free of bias and discrimination.
- o Evaluation of program staff and instruction occurs annually.
- o Program graduates are followed up systematically and the results are made available to teachers and administrators.

Comment

Program success occurs at the least common denominator--the class or program level; however, the responsibility for improvement is shared with school personnel. Normally, it is the vocational/technical director or the building principal with the authority to allocate resources for improvement. This is why feedback on the success of graduates should be shared school-wide. The decision to initiate new programs and/or improve old ones should be a school-wide decision shared with advisory group members from the community.

Few functions in education are more important than the career guidance of students. Adequate numbers of counselors with appropriate student test results can go a long way toward achieving parity of opportunity for students to be enrolled in vocational/technical programs. Marketing of programs to insure fair and equitable knowledge of career opportunities is essential for a balanced approach to education. One of the major roadblocks to equal opportunity for students is increasing high school graduation requirements. Schedules often prohibit individuals from attending vocational/technical programs of their choice. This problem can best be addressed at the school level.

School based follow-up of students following graduation provides one of the best means of gauging program success. Employers should be satisfied with the performance of program completers. The vocational/technical program should add value to the worth of an employee for an occupation related to skills taught in the secondary school. Students themselves should feel good about a course or program, and their opinions should be valued.

Program Criteria

Vocational/technical programs are a mosaic of highly varied occupational preparatory courses and experiences; they are not necessarily a uniform display of knowledge and skills needed for employment. Each vocational/technical specialty calls into play unique knowledge and abilities relevant to a cluster of occupations. The criteria in this paper do not attempt to address the unique employment requirements of each occupational cluster. Rather, the criteria focus on the conditions necessary for the development of students within the framework of their occupational/career objectives. These are "educational" criteria necessary for the effective functioning of vocational/technical programs as a whole. Not all criteria will apply to all vocational/technical programs.

Criteria

- Program advisory committees meet regularly to review the program and suggest improvements.
- Students are provided the opportunity to develop technical skills appropriate for the occupation of their choice.
- Students are provided the opportunity to develop leadership skills.
- Students are provided the opportunity to explore selected occupations of their choice.
- Curriculum materials are appropriate and up-to-date.
- Instructional methods are appropriate for the course.
- Health and safety rules are observed by teachers and students.
- The physical facility and equipment support a high quality program.

Comment

Program advisory committees are the window of reality into an otherwise contrived educational environment. Members of these committees should represent business, industry, and labor positions in the community. Often these members are frequent employers of program graduates. They should be in a position to advise on the direction of the program, and provide community support where needed and appropriate. For example, advisory committee members may suggest cooperative placement locations for students.

Skill development is at the heart of any vocational/technical program. At the secondary level or the postsecondary level, task-orientated proficiency is the purpose of the instruction. Laboratory and/or cooperative programs should ask students to keep a list of competency-based, employability skills mastered in the program. This may become a convenient "passport" to employment upon completion of the program.

Leadership skills and career exploration go hand-in-hand toward the development of the individual student. Group process skills may be obtained through participation in youth club activities. Public speaking and other contest-related activities also develop basic skills such as writing, reading, and so forth. Career field days and observation of persons on-the-job give youth a picture of real-world work experiences.

Curriculum guides serve as a vehicle for channeling learning experiences for youth and adults pursuing a particular occupational goal. Most state departments of education have curriculum guides for vocational/technical programs. Consistent with local control statutes in most states, school districts have the option of developing their own guides; however, most districts find it easier and better to use the state guides. Whenever possible, the curriculum guides should encourage articulation of programs with community colleges or other postsecondary institutions in the area. Many technical skill levels needed for productive occupations in society today require advanced preparation after high school.

Instructional methods should be consistent with the needs of the students and the subject being taught. The introduction of a topic should use the student's existing knowledge as a springboard for new learning. Disadvantaged students bring less to the classroom than most other students, so the instructor must use care to present situations in a light easily understood by these students. Clinical experiences and internships with businesses often provide an excellent opportunity for learning.

Health and safety in the classroom, laboratory, and on the job continues to receive increased attention by review teams. Electrical outlets should be safe; exhaust fans and dust collectors should be operable. Even sound levels are being checked periodically in some shops today. Some states still ask instructors to take a course in first aid; although this request is being reconsidered amid today's liability claims. Safety color codes are being used to mark exits and emergency equipment. Facilities must be free of architectural barriers that could limit access for handicapped students.

Summary

These criteria may be applied in various ways subject to the resources and time available to the state department of education. Some states rely on quantifiable, performance-based criteria to a greater extent than other states. To be effective, these criteria often require a network of management information to be available on demand. Many states are not able to meet these demands, and they must rely on more qualitative means of assessment.

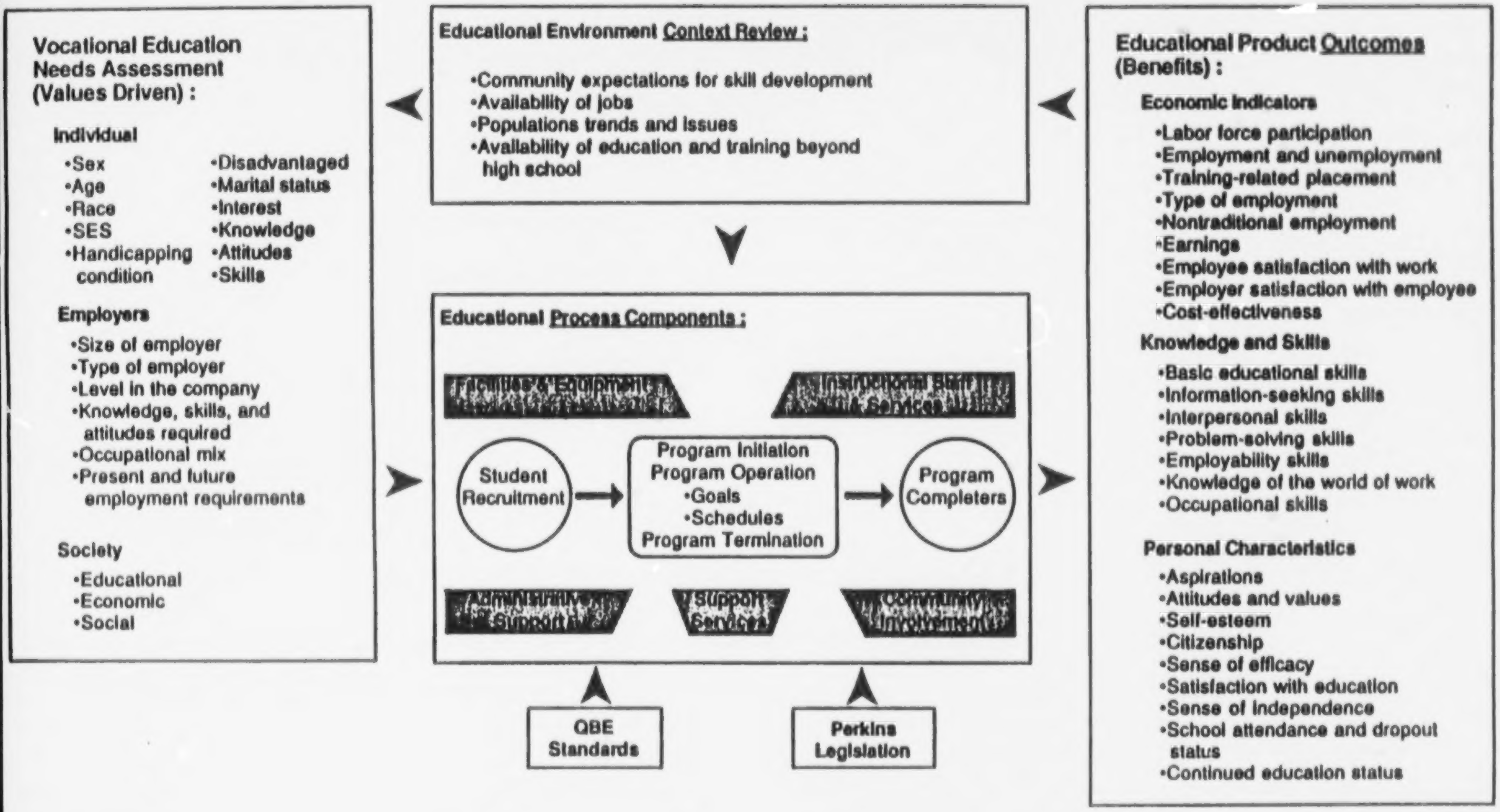
Vocational Education Needs Assessment (Values Driven) :
Individual
•Sex
•Age
•Race
•SES
•Handicapping condition
•Disadvantaged
•Marital status
•Interest
•Knowledge
•Attitudes
•Skills
Employers
•Size of employer
•Type of employer
•Level in the company
•Knowledge, skills, and attitudes required
•Occupational mix
•Present and future employment requirements
Society
•Educational
•Economic
•Social
Educational Environment Context Review :
•Community expectations for skill development
•Availability of jobs
•Populations trends and issues
•Availability of education and training beyond high school
Educational Process Components :
Facilities & Equipment
Instructional Staff and Services
Student Recruitment
Program Initiation
Program Operation
•Goals
•Schedules
Program Termination
Program Completers
Administrative Support
Support Services
Community Involvement
QBE Standards
Perkins Legislation
Educational Product Outcomes (Benefits) :
Economic Indicators
•Labor force participation
•Employment and unemployment
•Training-related placement
•Type of employment
•Nontraditional employment
•Earnings
•Employee satisfaction with work
•Employer satisfaction with employee
•Cost-effectiveness
Knowledge and Skills
•Basic educational skills
•Information-seeking skills
•Interpersonal skills
•Problem-solving skills
•Employability skills
•Knowledge of the world of work
•Occupational skills
Personal Characteristics
•Aspirations
•Attitudes and values
•Self-esteem
•Citizenship
•Sense of efficacy
•Satisfaction with education
•Sense of independence
•School attendance and dropout status
•Continued education status

Figure 1. Program planning and evaluation conceptual model

HANDOUT 1.2
Page One

PDK VOCATIONAL AND TECHNICAL EDUCATION EVALUATION PROJECT
WORK SESSION HANDOUT

OUTCOMES RECOMMENDED BY RECOGNIZED AUTHORITIES

The following sets are listed in chronological order. When written as statements they have been transposed here into questions in order to facilitate comparison of information.

Set One - Copa, 1986

Do opportunities exist for students to:

Build competence, apply the basics, think through problems, learn technical skills, explore life roles, learn to work together, express self and extend self to the community?

Set Two - Campbell and Panzano, 1985

Individual

Is there evidence of competency development in: basic skills, information skills, problem-solving skills, employment skills, job-specific skills, and career awareness?

Is there evidence of positive interpersonal interactions and a sense of efficacy?

Is there evidence of a sense of independence: enrichment and self-helping skills?

Societal

Is there evidence of social stability: essential services, quality of work product, resources for self-support and societal improvement?

Is there evidence of meeting employer needs: available skills, reduced training time and high productivity?

Set Three - National Commission, 1984

Is assistance provided to students in career decision making?

Are there activities designed to provide understanding of the reality of the work place?

Do students have opportunities which allow for trial and error at a time when error is not devastating to a young person's work record?

Are there opportunities for students to acquire necessary work habits, develop job skills and establish an employment record?

Are there opportunities for students and employers to connect in mutually satisfying arrangements?

Are there opportunities for experiences which provide earnings and potential for regular employment and serve as student motivators?

Set Four - Leske & Persico, 1984

Is the community experiencing: reduced unemployment; cost-effective school programs; decreased high school drop out rates; reduced crime and delinquency; decreased sex role inequities; reduced discrimination and social disadvantage for minorities and handicapped?

Is the employer experiencing: quality employees; reduced cost of training new employees; technically competent workers; satisfactoriness of student graduates?

Is the school experiencing: increased percentage of students graduating; placement of graduates; higher GPA; relatedness of training to employment; ability of students to pursue further education; increased school attendance?

Is the family experiencing increased earnings?

Is the individual (as a student, worker and family member) experiencing: wages and earnings; job advancement; self-employment; job skills; job satisfaction; affective work competencies; occupational knowledge; school satisfaction; job seeking skills; basic skill development?

Set Five - Nowakowski et al., 1984

Do students have an understanding of: their own personal interests; their own mental and physical abilities; their own communication or interpersonal skill needs; skills in decision making an planning; work values and how they affect personal values?

Do students possess information about: art; design and communication occupations; governmental careers; health occupations; industrial occupations; office occupations; scientific and technical occupations; service occupations; transportation careers?

Do students develop the basic skills required in the above careers?

Do students have opportunities to explore careers in the above groups?

Set Six - McKinney & Fornash, 1983

(These are the five outcomes strongly supported out of the 18 candidate outcomes)

Do students have opportunities to develop safe work habits?

Do employers express satisfaction with program graduates?

Are there opportunities for upgrading occupational competencies?

Do students acquire useful occupational skills?

Are there opportunities for the retraining of workers?

Set Seven - Bottoms, 1983

Is there enhanced satisfaction with occupational choice?

Is there increased occupational knowledge and skills?

Is there placement in employment and the potential for utilizing skills in the work place?

Set Eight - Silberman, 1983 (Recommended intrinsic outcomes)

Do students have opportunities to acquire sufficient technical skills and knowledge in order to achieve competence in some occupational area whether or not pursuing additional education?

Are students able to transfer school taught skills to applied settings?

Do students have opportunities to develop the personal skills and attitudes of autonomy (independent and responsible for their own actions), courage (confront their own problems directly and cope with problem situations) and cooperativeness (dependable, loyal to the group, conforming to group norms)?

Set Nine - Darcy (as cited in Mitzel, 1982)

Do students have opportunities for improving basic educational skills, developing useful occupational skills, acquiring world of work knowledge, developing leadership qualities, developing commitment to education at the high school level?

Do students experience post-secondary educational success, increased earnings, satisfaction with school, reduced job search time?

Is there reduced risk of unemployment for minority youth?

Is there employer satisfaction with graduates?

Is there potential for area economic development?

Is there improved distribution of minorities among occupations?

Do graduates experience training related employment and the development of consumer self help skills?

Set Ten - Kievit in McKinney, 1978

Do students have access for enrollment and completion?

Do students express satisfaction with programs?

Do students have aspirations for further education?

Do students obtain work and increased earnings?

Do program characteristics include work experience and reflect manpower data; do programs use advisory councils and continue over a period of time (as opposed to one-shot short term exploratory)?

PDK VOCATIONAL AND TECHNICAL EDUCATION EVALUATION PROJECT
WORK SESSION HANDOUT

COMPILED OUTCOMES FROM SELECTED STATES

Colorado

Colorado's **Quality Vocational Program Review and Improvement Process** is designed for local review and team validation of six areas: instructional program, program facilities, business and community resources, vocational guidance and counseling, student placement and follow up, and administrative support (Colorado, n.d.).

The instructional program is rated using the following 21 outcomes to assess the organization of the content, student records and evaluation, and methods of instruction.

1. Does the program meet the program plan document components?
2. Is the program content based on input from program advisory committees?
3. Is the curriculum based on validated competencies for basic skills and job skills?
4. Are the units of instruction appropriately sequenced for student learning?
5. Are course outlines current?
6. Are lesson plans maintained?
7. Is instruction provided on safety practices?
8. Are career and occupational information an integrated part of the program?
9. Is entrepreneurship education integrated into the program?
10. Are job-seeking skills integrated into the program?
11. Are bias free instructional materials used?
12. Are bias free texts used?
13. Does instruction reflect nondiscriminatory practices?
14. Are current and accurate references maintained?

Colorado (Continued)

15. Do vocational student leadership organizations integrate leadership training, maintain student records and evaluation, document a program of work and apply leadership skills to job entry advancement?

16. Are student records maintained for job assignment, student competencies, student grades, student attendance and anecdotal notes?

17. Are the results of student achievement measured by standard occupational proficiency tests, criteria in referenced tests and other examinations of student skills, knowledges, attitudes and readiness?

18. Which of the following methods are utilized for achieving competent training for occupations and are they utilized appropriately:

    Cooperative Method, Project Method, Laboratory Method, Internship Method, Clinical Method, Supervised Method, Simulation, Computer Instruction or Other?

19. If the Cooperative Method is utilized, is there evidence of a designated vocationally credentialed teacher/coordinator, work site visitations, a calendar of coordination activities on file, utilization of a signed training agreement for each student, nondiscriminatory clause in each training agreement with employer and utilization of a training plan for each student?

20. Is related instruction integrated into the program?

21. Are appropriate and adequate units of instruction (hours-weeks) provided for job skills training?

Florida

It was reported by Dr. Gieals, of the Florida Department of Education, that prior to 1986 there were sixteen standards in place for the evaluation of secondary vocational education programs. The current evaluation of programs, a locally directed instructional program review, is described below. (Florida DOE, Vocational Education, 1988)

Individual course instructional objectives are developed locally and reviewed annually for inclusion in the State of Florida's **Vocational Education Program Courses Standards** referred to below.

Florida (Continued)

The purpose of vocational education instructional program review is to examine vocational education programs and courses in accordance with Florida Statutes Section 233.0682, State Board Regulations. The State Board of Education shall adopt regulations setting forth minimum requirements for a comprehensive vocational education program and shall adopt procedures for determining the extent to which such minimum requirements are being met. Such requirements shall include examination of the employment performance of program participants as well as standards of educational output, with particular emphasis on job placement and satisfactory performance in employment. Instructional program review addresses the extent to which minimum program requirements are being met. The review process relates to program criteria and program capability. The primary objective of program review is program improvement.

Program Criteria

1. **Program Content Standard**

   The content and implementation of the program or course are consistent with the 1988-89 *Vocational Education Program Courses Standards*.

2. **Grade-Level Standard (school district only)**

   The grade levels of students are consistent with the 1988-89 Course Code Directory.

3. **Teacher Standard**

   The program or course is staffed by a qualified teacher(s).

Program Capability

4. **Facility Standard**

   The facility enables each student to attain student intended outcomes.

5. **Equipment, Tools, and Supplies Standard**

   Equipment, tools, and supplies are available which will enable each student to attain student intended outcomes.

6. **Instructional Materials Standard**

   Instructional materials are available which will enable each student to attain student intended outcomes.

Georgia

Twenty-five outcomes are listed in the **Program Planning and Evaluation Conceptual Model** developed for the Office of Instructional Programs, Georgia Department of Education (Hull, 1987). These are listed below:

Is there evidence of data being collected on:

Labor force participation
Employment and unemployment
Training related placement
Type of employment
Nontraditional employment
Earnings
Employee satisfaction with work
Employer satisfaction with employee
Cost-effectiveness
School attendance and drop out status
Continued education status

Do programs provide students with opportunities to develop:

Basic educational skills
Information seeking skills
Interpersonal skills
Problem solving skills
Employability skills
Knowledge of the world of work
Occupational skills
Aspirations
Attitudes and Values
Self-esteem
Citizenship
Sense of efficacy
Satisfaction with education
Sense of independence

The Georgia Assessment Guide for secondary vocational education program evaluation groups outcome questions under eight program standards as follows. (Georgia, 1988)

Standard I - Philosophy and Purpose

1. Are vocational program offerings in agreement with the Philosophy and Purpose of the institution?

2. Is there an annual local review of the statement of Philosophy and Purpose?

Georgia (Continued)

3. Who is involved in the annual review?

4. Is the annual review of Philosophy and Purpose recorded?

5. Has the Local Education Agency (LEA) approved the Philosophy and Purpose statement?

6. Does the school's statement of philosophy and purpose include a nondiscriminatory statement pertaining to race, color, national origin, sex, or handicap?

Standard II - Organization and Administration

A. Organization

   1. Are school personnel aware of the existing administrative structure?

   2. Are lines of authority clearly delineated?

   3. Is the organizational structure functional?

B. Administration

   1. Do the vocational education personnel function according to written job descriptions?

   2. Are school personnel aware of existing policies?

   3. Where do personnel locate administrative policies?

   4. Are the system's operating policies and procedures nondiscriminatory?

Standard III - Annual and Long Range Planning

1. Who is responsible for developing the annual program plan and application?

2. Who is responsible for developing the long-range plan?

3. How are the annual application and long-range plan developed and interrelated?

4. Are job market projections used in the planning process?

5. Does the assessment process include student and community needs, local job market, finance, handicapped, disadvantaged, minority and vocational equity concerns?

Georgia (Continued)

6. Are long-range plans, along with supporting data, considered and approved by the local board?

Standard IV - Educational Programs (Secondary)

1. Are program and course objectives used to direct and evaluate student activities?
2. Are the objectives reviewed regularly to ensure relevancy in the occupational area?
3. Are programs, policies, and admission practices structured to provide educational options for all students?
4. Identify the occupational objective of each student.
    1. Ask student
    2. Review records
    3. Is the objective realistic and attainable?
    4. Does the objective have a recognized occupational title or DOT/OE Code?
5. Determine that all curriculum and instructional materials are nondiscriminatory.
6. Determine whether the local board, advisory council, and program craft committee are comprised of representatives from both sexes, ethnic minorities, and the handicapped.

Standard V - Physical Facilities

A. Existing Facilities

1. Do the facilities meet special education requirements?
2. How are flammable materials handled and stored?
3. Describe procedures for providing emergency medical care.

B. Operation and Maintenance of Facilities

1. How do you report or handle a breakdown in the environmental system?
2. After reporting maintenance problems is the repair time excessive?
3. Is the staff expected to do maintenance work on instructional equipment?

Georgia (Continued)

C. Improvement

1. Is there a plan for facility improvement?
2. How is the plan developed?
3. How are priorities for improvement determined?

Standard VI - Community Relations

1. What methods or a developed plan insure community involvement?
2. Does the governing board use suggestions from community leaders?
3. If established, are school clubs actively engaged in community-related projects?
4. Does the LEA encourage established youth clubs to develop projects related to community involvement?
5. Determine the extent of Local Advisory Council involvement in community relations.
6. Determine whether school brochures or catalogs contain discriminating information or photographs.

Standard VII - Vocational Guidance

1. Are counseling services offered to all students?
2. Are counselors aware of vocational program goals?
3. Is job placement assistance available?
4. Do counselors encourage enrollment in vocational programs?
5. Is there a working relationship between counselors and staff?
6. Has the counseling staff provided in-service training to aid in the elimination of sex role stereotyping and sex discrimination?
7. Is student organization participation encouraged?
8. What ancillary services are provided for the handicapped and disadvantaged?
9. Are there alternative or modified programs available for students with special needs?

Georgia (Continued)

10. Are there student orientation procedures?

11. How are students assisted in making career decisions?

12. Have procedures been established to ensure the necessary security of student records?

13. Is there an annual evaluation of vocational guidance services?

Standard VII - Placement and Follow-up

1. How does the job placement program work?

2. How can the placement program be improved?

3. Are instructors informed of the placement rates of those students who complete or leave the program?

4. Are there any problems contacting former students?

5. Are potential employers notified of the school's nondiscriminatory policies regarding job placement?

Illinois

In their three phase development plan for a state evaluation system for Vocational Education, the Illinois State Board of Education describes "Phase One: Vital Sign Assessment" as an assessment of a program's overall health using student test results; document reviews; and surveys of employers, current students, and former students. The selected vital signs (or basic indicators) to be assessed are listed below. Specific criteria are currently being developed for use during the 1990-91 school year. (Illinois State Board, 1988)

Placement
Enrollment
Employer satisfaction
Student satisfaction
Cost containment
Labor market justification
Student Performance: general employability skills are to be developed from Task Lists by instructors and incumbent workers

North Carolina

Six standards enacted by the 1985 General Assembly of North Carolina for the assessment of secondary vocational education programs are listed below. An additional seven outcomes are also used by LEAs as required by the North Carolina Department of Public Instruction. (North Carolina, 1988)

State Standards

Do courses meet identified minimum/maximum enrollments?

Are the needs for job skills programs being documented based on labor market data?

Are the need for job skills programs being documented based on follow up data?

Do facilities and equipment meet minimum identified standards?
Do all instructional and support personnel meet minimum certification requirements?

Do students enrolled in the cooperative-method-of-instruction programs receive their on-the-job training in jobs directly related to the content being taught in the classroom?

The seven DPI outcomes are derived from asking the following question of seven program areas. Do students meet the competencies developed by the SEA for:

Agriculture
Business and Office
Health Occupations
Home Economics
Industrial Arts/Technology Education
Marketing Education
Trade and Industrial Education?

Wisconsin

According to the **Aggregate Evaluation Report for Secondary Vocational Education in Wisconsin, 1984-87**, the following five outcomes were used to assess program results. (Wisconsin DOE, 1989)

1. Were students employed after leaving programs?

2. Did secondary graduates seek post-secondary education?

3. Did graduates, in-school students and employers express satisfaction with the training?

Wisconsin (Continued)

4. Were there differences in earning, employment and satisfaction levels of parents, in-school students, employers and graduates between male and female students?

5. Were there differences (in the variables listed above) between regular and special needs students?

As reported in the **Team Member Handbook for 1989: Wisconsin DPI Secondary Vocational Program Evaluation Project**, seventeen evaluation criteria are being used to assess the program component. Programs fall into the following clusters: agriculture, business education, health occupations, family and consumer education, marketing education and technology education. The criteria are listed below. (Wisconsin DOE, 1989)

1. Does the program area have a philosophy of vocational education and is it used to direct the (agriculture, business education, health occupations, family and consumer education, marketing education, technology education) program?

2. Does the program area use a formal needs assessment and is it used for improvement and expansion of _______ programs?

3. Is the program area included in the Two-Year Plan?

4. Is a written comprehensive curriculum being used?

5. Does the _______ curriculum promote and support the goals of vocational equity?

6. Do the course offerings reflect current, new, and emerging occupations including awareness, broad-range knowledge, transferable skills, and specialized training?

7. What are the male and female enrollment/membership figures for the _______ program?

8. Can the staff accommodate the needs of all students in the _______ program?

9. Do the facilities, equipment, and resources support the _______ program in new, innovative, and exemplary ways?

10. Has an advisory committee been established for the _______ program and is it functioning?

11. Has a vocational student organization been established and is it functioning?

12. Does the comprehensive career guidance program serve the needs of students who may benefit from the _______ programs?

Wisconsin (Continued)

13. Does the district actively promote the vocational education program and is the ________ program an active participant in the promotional activities?

14. Does the program area follow-up graduates each year and are the data used in program planning and implementation?

15. Does the program area survey employers of graduates and are the data used in program planning and implementation?

16. Does the program area survey in-school students, advisory committee members, staff, parents and Board of Education members and is the data used in program planning and implementation?

17. Have recommendations from prior evaluations been addressed and have changes occurred as a result?

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OUTCOMES REFLECTING CURRENT TRENDS

Kadamus

According to Kadamus and Daggett, citing other studies including a review by Pratzner in 1983, there is considerable support for a new direction for secondary vocational education which emphasizes student attainment of broad transferable skills and a better integration of programs goals with general education (Kadamus, 1986).

They consider the following to be the most important skills students need to develop:

- knowledge of the systems of computers and technology
- problem solving and decision making skills
- resource management skills
- understanding of the economics of work
- applied math and science
- interpersonal skills
- data manipulation skills.

Lindeman

In responding to a set of questions, reported in **State Concerns in the Future Development of Vocational Education,** Anne Lindeman spoke to new directions. "We need to broaden vocational education and the employability skills, the generic broad skills, that everybody needs and can use to operate in today's society." She touched on a few of these employability skills as follows (Lindeman, 1984).

- read and comprehend
- apply basic math skills
- use knowledge and apply it to what they are doing
- learn to work together
- be able to problem solve

Finn

In an article in the Phi Delta Kappan, Chester Finn, Jr. classifies the reasons for schooling as Social, Personal, and Utilitarian and says that we are close to consensus in believing that college-bound and non-college-bound kids should be treated the same in the social and personal curricula, but the disagreement lies in the area of utilitarian reasons for schooling. He cites the two extremes in defining the utilitarian curricula for non-college-bound and then expresses his view that there are trends which could form a new consensus in this area. He expresses these in terms of skills, knowledge, values, and habits to be acquired - in the high school - in vocational education programs (Finn, 1986).

- be functionally literate
- complete one's obligations
- live up to one's responsibility
- work cooperatively with colleagues
- take direction from superiors
- be honest and law abiding
- develop the ability and willingness to learn throughout a working lifetime

In concluding this section of his article, Finn cites from **Investing in Our Children**, a publication of the Committee for Economic Development. Their 1985 report indicates that most employers prefer curricula that stress the following:

- literacy
- math skills
- problem solving skills
- learning how to learn
- adapting to change
- self discipline
- self reliance
- teamwork
- acceptance of responsibility
- respect for the rights of others.

Walker

The 2+2 or tech-prep programs in vocational education, which have been described by some advocates as the "wave of the future", were summarized in an article by Reagan Walker in the March 15, 1989 issue of **Education Week** (Walker, 1989). These programs had their inception in Virginia more than six years ago and have continued to proliferate. Other states currently reported to be emphasizing tech-prep are California, Michigan, New York, North Carolina and Ohio.

In regard to student outcomes, tech-prep programs are built around cooperatively selected core competencies specific to a selected occupational area. Mastery of employability skills is tied to levels of exit from the training, thus 2+2, or 2+2+2. In addition, some states using tech-prep competency based programs also include a heavy emphasis on student outcomes in language, mathematics and the humanities.

Brannon

During a telephone interview with Dr. Donald Brannon, Director of Program Improvement and Evaluation for Vocational Education in regard to North Carolina's Achievement Tracking System, he described the work of the Vocational/Technical Education Consortium of the States (VTECS). The following is an abstraction of that interview.

> The Consortium members represent several states whose SEAs are dissatisfied with the singular reliance on standardized test results for the measurement of student progress. Their work is essentially a grass roots movement whose purpose is to develop a computerized catalog of test items to be shared across states and local districts. At this time a number of states are developing task lists specific to occupations.

From the literature review it appears that some SEAs are requiring that these task lists be jointly developed by instructors and incumbent workers. Through a process of task analysis specific criteria are being identified. The resulting data bank of test items will allow practitioners to develop criterion referenced tests for their instructional programs without a duplication of effort from school to school and program to program.

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OUTCOMES REQUIRED BY FEDERAL LEGISLATION

Outcomes	Source
Student placement in job related fields	1976 Amendments
Employer satisfaction with program graduates	

Outcomes	Source
Pertinence of program to the workplace and to new and emerging technologies	Added by the Perkins Act
Responsiveness of programs to the workplace and to new and emerging technologies	
Responsiveness of programs to the current and projected occupational needs in the state	
Needs identified:	
The occupations to be trained for, which will reflect a realistic assessment of labor market needs of the state	
The levels of skills to be achieved in particular occupations, which will reflect the hiring needs of employers	
The basic employment competencies to be used in performance outcomes, which also reflect the hiring needs of employers	
The capacity of programs to facilitate entry into, and participation in, vocational education and to ease the school-to-work and secondary-to-post secondary transition	

Outcomes	Source
The technological and educational quality of vocational curricula, equipment, and instructional materials to enable vocational students and instructors to meet the challenges of increased technological demands of the workplace	Added by the Perkins Act
The capability of vocational education programs to meet the needs for general occupational skills and improvement of academic foundations in order to address the changing content of jobs	

HANDOUT 1.6
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CANDIDATE OUTCOMES RATING FORM

Directions: Provide a score from the rating scale for each outcome from each question A, B, and C, and total the score or mark N/A for not applicable; respond yes or no to question D.

Questions to be asked in determining the value of each outcome:

- A. How well does it address the achievement of national goals, ideals or social values?
- B. How well does it speak to the needs of actual or potential clients?
- C. How well does it meet agreed upon standards or norms set by experts or other relevant groups?
- D. Could this outcome be rewritten to improve its quality in regard to clarity, inclusiveness and feasibility of application?

RATING SCALE	Not at all (1)	Poorly (2)	Adequately (3)	Well (4)	Extremely Well (5)	A	B	C	N/A or Total	Question D Yes or No

		A	B	C	N/A or Total	Question D Yes or No
1.	Does the quality of vocational curricula, equipment, facilities, and materials enable students to meet the increased technological demands of the workplace?					
2.	Are the results of student achievement measured by standard occupational proficiency tests?					
3.	Are students provided an opportunity to develop technical skills appropriate for the occupation of choice?					
4.	Do opportunities exist for students to learn technical skills?					
5.	Do students acquire useful occupational skills?					
6.	Do students acquire sufficient technical skills to achieve competence in some occupation?					
7.	Do students have opportunities to master employability skills built around selected core competencies specific to a selected occupational area?					
8.	Is the curriculum based on validated competencies for job skills?					
9.	Do the course offerings reflect current, new, and emerging occupations including transferable skills and specialized training?					
10.	Do students acquire skills in applying math and science skills?					
11.	Do students acquire skills in data manipulation?					

12. Do students acquire knowledge of systems of computers and technology? ____ ____ ____ ________ ________

13. Are general employability skills developed from task lists by instructors and incumbent workers? ____ ____ ____ ________ ________

14. Are programs of instruction capable of meeting the needs for general occupational skills and improvement of academic foundations to address the changing content of jobs? ____ ____ ____ ________ ________

15. Is the curriculum based on validated competencies for basic skills? ____ ____ ____ ________ ________

16. Do course offerings reflect current, new, and emerging occupations including awareness and broad range knowledge? ____ ____ ____ ________ ________

17. Is there evidence of competency development in basic skills, information skills, problem solving skills, decision making skills, and resource management skills? ____ ____ ____ ________ ________

18. Do opportunities exist for students to think through problems, learn to work together and express self? ____ ____ ____ ________ ________

19. Do programs address consumer self help skills? ____ ____ ____ ________ ________

20. Are there opportunities to acquire necessary and safe work habits? ____ ____ ____ ________ ________

21. Are students developing basic skills and affective work competencies? ____ ____ ____ ________ ________

22. Do students have an understanding of their own mental and physical abilities, communication skill needs, skills in decision making and planning, and how work values affect personal values? ____ ____ ____ ________ ________

23. Are students able to transfer school taught skills to applied settings? ____ ____ ____ ________ ________

24. Do students develop skills, knowledge, values, and habits to complete one's obligations, live up to one's responsibilities, work cooperatively with colleagues, develop the ability and willingness to learn throughout a working lifetime? ____ ____ ____ ________ ________

25. Do the curricula stress learning how to learn, adapting to change, self discipline and self reliance, teamwork, acceptance of responsibility, and respect for the rights of others? ____ ____ ____ ________ ________

26. Is there placement in employment and the potential for utilizing skills? ____ ____ ____ ________ ________

27. Are students placed in job related fields? ____ ____ ____ ________ ________

28. Are instructors informed of the placement rates of those students who complete or leave the program? ____ ____ ____ ________ ________

29. Were students employed after leaving the program? ____ ____ ____ ________ ________

30. Are program graduates followed up systematically and are the results made available to teachers and administrators?

31. Do employers express satisfaction with program graduates?

32. Is the employer experiencing quality employees, reduced cost of training new employees, and technically competent workers?

33. Are the need for job skills programs being documented on follow-up data?

34. Does the program area survey employers of graduates and are the data used in program planning and implementation?

35. Is there evidence of meeting employer needs for skills, reduction of training time and costs, and high productivity?

36. Do students express satisfaction with the programs?

37. Do graduates, in-school students, and employers express satisfaction with the training?

38. Does the program area survey advisory committee members, staff, parents, and school board members and is the data used in program planning and implementation?

39. Is there evidence of labor market justification?

40. Are the needs for skills documented by labor market data?

41. Do programs reflect manpower data?

42. Is there evidence of meeting employer needs?

43. Is there potential for economic development?

44. Are programs responsive to current and projected occupational needs, required occupations to be trained for, level of skill to be achieved, and competencies which match hiring needs of employers?

45. Is there a comprehensive career guidance program serving the needs of all students who may benefit from any program cluster?

46. Do comprehensive career guidance activities support the development of occupational potential among students through vocational/technical programs?

47. Are students provided the opportunity to explore selected occupations of their choice?

48. Do all students have access for enrollment and completion?

49. Are there alternative or modified programs available for students with special needs? ____ ____ ____ ________ ________

50. Are career and occupational information part of a student's program? ____ ____ ____ ________ ________

51. Do students develop an understanding of the economics of work and the reality of the workplace? ____ ____ ____ ________ ________

52. Are job seeking skills developed? ____ ____ ____ ________ ________

53. Do students possess information about all occupational clusters? ____ ____ ____ ________ ________

54. Is there a working relationship between counselors and staff? ____ ____ ____ ________ ________

55. Is job placement assistance available? ____ ____ ____ ________ ________

56. Has the counseling staff provided in-service training to aid in the elimination of sex role stereotyping and sex discrimination? ____ ____ ____ ________ ________

57. Is there an annual evaluation of vocational guidance services? ____ ____ ____ ________ ________

58. Is there evidence in the community of social stability? ____ ____ ____ ________ ________

59. Is there improved distribution of minorities among occupations? ____ ____ ____ ________ ________

60. Is there reduced risk of unemployment for minority youth? ____ ____ ____ ________ ________

61. Is the community experiencing reduced unemployment, reduced discrimination and social disadvantage for minority and handicapped citizens, decreased sex-role inequities, and reduced crime and delinquency? ____ ____ ____ ________ ________

HANDOUT 2.1
Page One

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ALTERNATIVE SETS OF ORGANIZERS, THEIR FUNCTIONS AND THEIR SOURCES

Background

In a 1987 report by the National Center for Research in Vocational Education, their findings show that the **categories** (organizers) **generally addressed in evaluations of vocational/technical education have been 1) Economic, 2) Educational, and 3) Personal/Societal** (National Center, 1987). Three alternative sets of organizers are presented here with evaluation functions and sources. These were selected on the basis of being representative of the literature which was reviewed and each being somewhat different in emphasis and conceptual framework.

SET ONE

Organizers	Function	Source
Quality of Instruction a. Process, b. Product	For the assessment of elements "fundamental" to programs	Grant Venn "Criteria Against Which Vocational Education Should be Held Accountable" (in McKinney, 1978).
Relevance of Program a. Process, b. Product	For the assessment of quality as judged by the perceptions and actions of students, parents, employers, and staff	
Impact of the Program a. Process, b. Product	For the assessment of quality as measured by changes in the "environment" indicating the vocational program is valued and needed	
Individual Transition and and Growth a. Process, b. Product	For an assessment of what difference did the program make as judged by what happens to the learner after leaving the program	

SET TWO

Organizers	Function	Source
School Context Work Context Family Context Community Context General Individual Goals	To assess student performance along a continuum moving toward the attainment of goals for role expectations in five constituent groups, including the general set of expectations deriving from the individual's perspective of self	Gary Leske "Indicators of Quality in Cooperative Vocational Education: A Review and Synthesis of Research," 1984.

SET THREE

Organizers	Function	Source
Labor Market Related a) individuals b) institutions c) society	To broaden past practices from assessments which concentrated on the effects on individuals to assessments which look at effects on individuals, institution (sub populations of society) and society	Morgan V. Lewis & Frank C. Pratzner "Perspectives on Vocational Education: Purposes and Performance," 1984.
Economic a) individuals 1. immediate 2. interim 3. long range b) sub populations 1. immediate 2. interim 3. long range c) society 1. immediate 2. interim 3. long range	Same as above adding the third dimension of "time." One rationale for this additional dimension is Grasso's suggestion that the primary value of vocational education rests not only on immediate outcomes . . . but on the transfer value over the long run (Grasso, 1979).	Joanne Farley, "Vocational Education Outcomes: A Thesaurus of Outcome Questions," 1979.

Organizers	Function	Source
Education Related a) individuals b) institutions c) society	See above	Lewis & Pratzner, 1984.
Education a) individuals 1. immediate 2. interim 3. long range b) sub populations 1. immediate 2. interim 3. long range c) society 1. immediate 2. interim 3. long range	See above	Joanne Farley, 1979.
Psycho-Social a) individuals 1. immediate 2. interim 3. long range b) sub populations 1. immediate 2. interim 3. long range c) society 1. immediate 2. interim 3. long range	Category added to assess effects on attitudes (motivation) of learners along a continuum up to intergenerational impacts (productivity, work ethic, etc.) on society	Joanne Farley, 1979.

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SELECTED STUDY FINDINGS

The following is a collection of findings from a review of the literature which were judged to be relevant to the tasks and activities to be accomplished during the project work sessions.

Evaluation Framework

Madaus, Scriven, & Stufflebeam, 1983.

Stufflebeam's CIPP evaluation model is described as "geared more to a system view of evaluation . . . and is concentrated on . . . providing ongoing evaluation services to the decision makers in an institution." As such it appears to be an evaluation framework which can be used effectively in carrying out this study. The relevance of the four types of evaluation: Context, Input, Process and Product to both formative and summative evaluation orientations is shown below.

Evaluation Types

	Context	Input	Process	Product
Decision Making (Formative)	Guides choice of objectives and assignment of priorities	Guides choice of program strategy and specifications of procedural designs	Guides Implementation	Guides decisions regarding termination, continuation, modification or installation
Accountability (Summative)	Record of objectives and bases for their selection and a record of needs, opportunities and problems	Record of a selected strategy and design and reasons for their selection	Record of actual process used	Record of attainments and recycling decision documents

Campbell & Panzano, 1985

In this report the authors cite a study by Drewes in which the CIPP model is described as "an integrated evaluation approach applied to an assessment of quality." Drewes expands the CIPP model adding two other types of evaluation: Impact evaluation, to assess intended and unintended results and Pairwise evaluation, to assess the interrelationships among the previous five types (CIPPI).

Campbell and Panzano recommend that any assessment of quality requires the development of sets of indicators (standards against which the quality can be measured). They propose using these indicators for the measurement of outcomes and educational programs, two elements to be incorporated into an evaluation system such as the Drewes model.

Darcy, 1979

In his report on a review of the literature on outcomes for vocational education, Darcy identifies six components of any educational system as appropriate for description and evaluation: Context, Students, Resources, Goals, Processes and Outcomes, and remarked on the similarity to the CIPP model. He then presents a conceptual framework for evaluation of vocational education with respect to outcomes:

Educational Outcomes (empirical phenomena, real world consequences of programs)

Outcomes Statements (hypotheses/questions)

Outcome Measures (data, empirical indicators)

Evaluation Standards (relative/absolute)

Analysis, Interpretation and Evaluation

Findings Concerning the Consequences of Particular Programs

Application of Findings: Policy, Program Design, Program Management, Accountability

His review indicates a need for a Profile of Data Types classified on the basis of the nature of the data and how generated. He makes recommendations for the improvement of outcomes evaluation. (These are listed in the Introduction section of the Final Report.)

Farley, McKinney, Kohan, Smith, & Pratzner, 1985

The following information was taken from "Reconceptualization of Vocational Education Program Evaluation " by the above authors.

"A large number of vocational education researchers and practitioners would . . . agree that the following quotation is as apt a description today as it was in 1976:

> The literature describing the evaluation of vocational education programs is discouraging: it yields little useful information for vocational educators. The research designs have used analytic procedures requiring simple quantitative input and have failed to encompass many important educational issues. Evaluations have used research methods that are incompatible with the complexity of the learning, teaching, and administrative situations. (Committee on Vocational Education Research and Development, 1976)."
>
> "We suggest that many of these and other inadequacies are associated with the operation of a particular conceptual framework underlying current vocational education evaluation practice (technological framework)." The authors analyze and critique possible alternatives for a conceptual framework and propose critical inquiry as best suited to vocational education evaluation.

They see critical evaluation as a mode of inquiry which can lead to the development of explanations of the setting in order to deal with problems or constraints accompanying the broad function of "providing and generating technical, practical, and critical knowledge and skills individuals need to become reflective and critical (i.e. emancipated) sociocultural members." Two of the results of employing a critical inquiry evaluation are identified as framing problems on the basis of the generative themes of the stakeholders (assumptions and presuppositions guiding an individual's view of the world) and interpreting problem dynamics based on some sort of consensus about "how and why the vocational education reality has evolved into what it is."

Needs

Starr, 1978

In his paper on developing state plans for vocational education, Dr. Starr recommends six planning steps: 1) generate needs; 2) formulate goals; 3) write statements of objectives; 4) describe goals as programs to be offered; 5) describe the criteria to assess goal attainment; and 6) prioritize the allocation of funds.

Under generation of needs he advocates using: employment data; student placement and follow-up; student interest; evaluation reports; federal priorities; research findings; pre and inservice program development; exemplary program development; curriculum development; research into programs; and administration and supervision skill development.

Grasso, 1979

Citing the Federal Register interpretation of the 1976 amendments to the VEA of 1963, Grasso reports that States' annual applications to the Federal Government will "describe the vocational education needs of potential students in the community or area . . . and indicate how, and to what extent, the program proposed in the application will meet such needs and describe how the findings of previous evaluations have been used to develop the proposed program."

He also reports that the 1976 amendments initially proposed a model for evaluation by the States which had three components: Process Evaluation, Product/outcome Evaluation, and Product/impact Evaluation. Under Process the evaluation was to show What is being done, Why (student and employer needs), Who delivers, Who receives, and How and under what conditions is it delivered? Under Product/outcome: career development and labor market outcomes for completers and leavers. Under Product/impact: student competencies as measured by criterion referenced tests and occupational proficiency tests. This proposal was not implemented.

Martin, 1980

In her paper on the identification of information needs for evaluation planning, Marilyn Martin of RBS proposes that a good evaluation plan must consider ten areas for a comprehensive evaluation.

Under "Program Background: Educational Needs," she identifies three categories of student educational needs: instructional, personal/social and attitudinal/value and recommends that two questions be used to obtain information. These are 1) What educational needs is this program designed to fulfill? and 2) What evidence was there that such needs existed?

Under "Program Background: Contributing Factors" she includes the present (community) economic situation and recommends that two questions be asked. These are 1) What was the economic situation at the time the program was planned? and 2) How did it influence the program?

Pratzner & Russell, 1983

In reporting on what the roles and functions of vocational education should be, the authors findings are that secondary and post secondary vocational education should address different national priorities and needs. For secondary these are identified as youth unemployment, equity and access, and basic skills. For post secondary these are identified as displaced workers, high technology, and critical skill shortages.

Worthington, 1983

In his 1983 paper, Robert Worthington, then Assistant Secretary for the Office of Vocational and Adult Education, USDOE, reviews the history and future directions for vocational education. He identifies eight areas of emphasis for the future: the development of true partnerships with business; robotics and automation; an expanded curriculum coordination network emphasizing telecommunications, technology, and applied math and science; customized training for new and developing business; closer relationship with the defense industrial base, access to and equity in quality vocational education programs; governance issue at the state level (need for full time state administrators with a broad understanding of voc ed and leadership skills); reduction of the high school drop out rate; and providing the new basics (from the educational reform movement) for inclusion in vocational education curricula.

Lindemann, 1984

In her question and answer session, Anne Lindemann talked about the then current situation and the priority areas being addressed in Arizona. She spoke to a need for generic skills being taught at the secondary level. "In terms of those generic skills, some of the **Jobs for Arizona Graduates** skill development manuals are right on target. They teach what we call employability skills; not specific trade school skills, but the more broad based skills that all people need on the job. We haven't been teaching those skills in high school. We haven't been teaching them how to operate in today's world."

Wilms, 1984

Dr. Wilms makes three recommendations in this Kappan article, from the employers point of view. To improve vocational education programs:

1. Secondary vocational education should be reformed (by) changing its purposes and structures to become more responsive to contemporary needs. (He cites as good

examples: experience based career education, the Richmond plan and Career Intern Programs all of which emphasize the application of skills and experiential activities.)

2. Employer based skills training should be created, linking training to employer demand.

3. Attention should be paid to small firms with specialized skill needs (by identifying those needs).

Brannon, 1985

In his report on using evaluation results in respect to program effectiveness, Dr. Brannon summarizes the effect of the Perkins Act. "The Act addresses effectiveness. It directs each state to develop measures for evaluating, specifically the effectiveness of programs assisted under this act in meeting the needs identified in the State plan. Dr. Brannon goes on to suggest the following as measures of program effectiveness: The occupations for which people train, which will reflect a realistic assessment of the labor market needs of the State; the levels of skills to be achieved in particular occupations, which will reflect the hiring needs of employers; the basic employment competencies to be used in performance outcomes, which will reflect the hiring needs of employers; and measurements for all of these regarding their effectiveness for the handicapped."

He also discusses Societal needs. "In a democratic society where most people's basic survival needs are met, higher level needs become the common focus. Equity and satisfaction are examples of higher needs. (They are also) ways of attaining other ideals . . . such as assisting the States in meeting the needs of the Nation's existing and future work force. These needs include the following: improve productivity and promote economic growth; serve those inadequately served; promote greater cooperation; improve academic foundations; serve the employed and the unemployed; serve economically depressed areas; provide supportive services, special programs, guidance counseling and job placement; increase consumer and homemaking effectiveness, and decrease sex role stereotyping."

Ertel & Neveu, 1987

From a review of Vocational Education R & D activities and from a summarization of a national AVERA conference held in 1982, the authors compile a list of priority research questions which need to be addressed.

Student Focused

Typical Areas of Inquiry	**Examples of Priority Research Questions**
Demographic Studies	What demographic studies are required to enable vocational education to meet long-term societal needs?
Special Populations	How can vocational education programs be structured and operated to optimally meet the needs of special populations?
Equity Issues/Equal Access to Programs	What policy and program considerations must be addressed to ensure equal access to vocational education on a rational basis?
Student Prerequisites	What are the minimal valid student prerequisites required for access to specific vocational education programs?
Minority/Females Issues	How can vocational education policies and program designs be structured to facilitate access to vocational education?
Outreach/Recruitment Issues	What outreach/recruitment issues must be addressed to ensure high quality, viable vocational education programs?
Attitudinal/Motivational Issues	How can vocational education programs establish and maintain motivational approaches that enhance program quality and completion rates?
Worker Dislocation	What worker dislocation studies are necessary to provide guidance and direction to curriculum development efforts?

Content/Area Focused

Typical Areas of Inquiry	Examples of Priority Research Questions
Labor Market Supply and Demand	What labor market studies are required to provide direction and focus to vocational education curriculum development efforts?
Vocational Education Needs Assessment	What occupational program/skills do current and future students require in order to achieve career goals?
High Technology Considerations	How will the transformations effected by high technology impact on vocational education programs and methodologies?
Emerging Occupations	What emerging occupations should vocational education be adapting to in order to meet the challenge change?
Basic Academic Skills	What are the minimal basic academic skills necessary in vocational education programs to meet short-term and long-term needs?
Flexible Skills/Transferable Skills	At what level of specificity should job skills be taught; what level of generalization will optimize future job change opportunities?
Academic/Vocational Mix	What is the appropriate mix of academic and vocational skills in specific occupational program areas?
Occupational Competencies	What occupational competencies are required in order to meet current and projected labor market demands?

William T. Grant Foundation, 1988

In an article by the Foundation in the Phi Delta Kappan, the authors summarize their recommendations into a list of ten goals. Goal One is "We must help Americans understand the needs of youth in today's society and teach Americans to deal with young people as a resource, not as a problem."

Evaluation in the States

Wentling & Barnard, 1982

The authors surveyed 50 (out of 57) State Directors of Vocational Education to establish rankings of eight possible criteria to be used as indicators of program quality. These were the rankings:

Employer feedback

Placement level

Quality curriculum materials

Job satisfaction

Instructor performance/Student test performance/Condition of equipment/School staff models

NOTE: The final four were equally ranked.

Criteria outside of the eight presented in the survey (one state each) were:

Participation

Serving special needs

Instructional preparation

Facilities

Instructional materials

Retention of students

Advisory Committee use

Guidance, counseling and placement

Leske & Persico, 1984

In this study a number of outcome measures were examined which have been used by those assessing vocational education programs. "None of the (documents) reviewed provided a system wherein goals, criteria and outcome measures were easily distinguished and conceptually distinct."

"The literature reviewed suggested the two major limitations of criterion outcome measures stemmed from: 1) philosophical differences concerning the goals of vocational education and 2) measurement problems within a dynamic social system. A major philosophical issue contributing to some of the goal conflict in vocational education derives from a lack of consensus concerning the purpose of vocational education in the public secondary school system."

Wentling & Barnard, 1986

In their analysis of perceived emphasis on six student outcomes, the authors report "Many states are attempting to improve the quality of education by increasing the number of academic courses required for high school graduation. Another approach has involved the identification of appropriate student outcomes of schooling." The study surveyed vocational educators in Illinois to look at "what is" and "what should be" in terms of outcomes.

Their conclusions as to the results of the study were that there were differences in current emphasis (what is) between secondary and post secondary respondents. In general, post secondary staff rated technical skills, occupational survival skills, and entrepreneurial skills higher than affective job skills, job search skills, and basic skills. This was not true of secondary respondents.

In regard to "what should be" vocational center personnel rated job search skills, technical skills, and occupational survival skills highest. Business and industry and university respondents "perceived less need for an emphasis on job skill preparation."

Under implications, the authors see a need to draw attention to student outcomes for articulation and make the following summary statement about their study. "It appears that there is a willingness to change the emphasis in vocational education programs, but there may be a need for knowledge on how to implement this change."

Buttram, et. al, 1987

In reporting on their study to evaluate competency-based vocational education (CBVE) in Pennsylvania, Buttram and others from RBS define CBVE as "performance based; individually paced; responsive to individual needs; providing for immediate feedback; based on task analysis; containing measurable objectives and criterion referenced assessment; including on-going program updates and input from the field." They concluded from their research that in spite of the lack of a supportive data base, almost all of the 94 officials and 348 teachers surveyed advocated the continuation of competency-based vocational education. The majority of respondents believed it had affected student instruction and learning positively.

National Center, 1987

Staff at the National Center for Research at The Ohio State University reports that when NIE commissioned a study in 1981 to ascertain what topics (organizers) states were using for vocational education evaluation, the results were: program operations/management and information on students/programs/staff/community.

When state systems were reviewed by National Center staff in 1987, "the same major topics were being addressed."

PDK Study - Telephone Interviews, February-March, 1989

In those cases where State level evaluators reported dissatisfaction with their current vocational education evaluation systems and/or instruments, they cited a need to move away from process evaluation toward an assessment of student outcomes.

PDK Study - Review of Selected States Evaluation Systems, February-March, 1989

Eleven state systems were reviewed and their organizers plotted on a matrix (See Table 2). The following is a ranked listing of those 33 organizers.

Number of States (N=11)	Organizers
9	Instructional program content and organization/Student Placement and follow-up
8	Equipment, tools, and supplies/Program facilities
6	Vocational guidance and counseling/Labor market justification
5	Instructional materials/teacher qualifications/Business and community resources/Administrative support/Changes resulting from previous evaluations
4	Advisory committees/Access to programs
3	Student performance/Student organizations/Promotional activities and student recruitment/Vocational equity goals
2	Student enrollment/Philosophical base/Competency based/ Student satisfaction

The remaining 12 outcomes were used in only 1 state. It should be noted that this listing of organizers does not imply that any of the 33 variables are not being addressed by evaluation activities in use in a particular State, it only shows that the particular variable was not identified as a category of sub-variables in their system.

General Recommendations from the Literature

Mitzel, 1982

"It is recognized that no single criterion is likely to be satisfactory by itself for evaluating vocational programs and no national consensus exists on a limited set of outcomes to serve as evaluation criteria." Mitzel is referring here to the past practice in vocational education evaluation of using placement in a job as the single criterion for program success.

NOTE: A number of authors reviewed for this study speak to the concern that there are vast differences concerning the goals of vocational education and that this is a major impediment to evaluation.

Silberman, 1983

In his study Silberman speaks to the problem of goal setting for vocational education as follows.

> Many problems attributed to the schools or to vocational education within those schools, have their origin in economic arrangements in the wider society. And, as I concluded in a recent paper, we must ask ourselves whether our national policies are attempting to solve long-standing, deeply-rooted social problems with quick and easy school solutions without addressing the social contexts or the organizational structures that sustain the problems.
>
> The school system has played an important gate-keeping role in providing credentials and certificates that are used in dividing labor and distributing resources among our people. That system has produced an acceptable rationale for explaining the inequities in the work place as the schools are ostensibly meritocratic institutions that allocate benefits according to ability.
>
> Closing the gap between the educational levels of different groups does not produce a similar closing of the income gap. If we reach the stage where almost everyone has a bachelor's degree, we can expect growing disaffection with our colleges--for the same reason we are disaffected with the high schools--they will no longer serve a useful sorting function in allocating people to preferred roles.

Another problem underlying our present school crisis is the lack of consensus about goals. I think the popularity of the back-to-basics theme in recent reports by the National Commission on Excellence in Education lies not so much in the approach's likelihood of success in solving our economic problems as in its restoration of a sense of common purpose in American education. Having a clear set of goals takes much of the painful ambiguity out of our actions.

Admittedly, we can learn much about goals by observing existing or traditional educational practices. An alternative approach to determining goals, however, and one which becomes increasingly important in a rapidly changing society, is to explore future trends via demographic projections.

The labor force is projected to expand faster than the total population, so companies should be competing for the services of the members of the class of 2000.

On the demand side, technology may produce structural changes of two kinds. Many semiskilled jobs in the white-collar service sector may be de-skilled or eliminated (e.g., bank tellers, cashiers, coders, bookkeepers, etc.), while other jobs will be created that demand highly advanced analytic and interpersonal skills that require long periods of professional training. Segmentation of the labor market will probably continue, and most high school graduates seeking employment will still go into white collar clerical sales or service work in the private sector.

We will still have wide individual differences in achievement among our students, and their academic aspirations concerning advanced degrees will be positively related to their earlier achievement. There will continue to be wide differences in the quality and status of jobs depending on one's background, education, race, residence, and gender; but these differences probably will not be as great as they are today.

The labor force will not only be larger, but also will have a higher median age. The post World War II baby boomers will be running things, so it will not be surprising to find greater participation by workers in decisions that affect them. The work place is likely to be less formal, greater mobility of workers across national boundaries. There will continue to be a conflict between corporate and family needs and there will be a much greater emphasis on ecology and conservation.

One implication of these changes is that more adult education offerings for older, part-time students will be required. Lifelong learning and

> retraining for such a population is already receiving considerable attention in the media. Another implication is that young people will need to be broadly educated. They must have the ability to read, write, analyze, compute, communicate, and evaluate. They must have technical skills and knowledge that prepares them not only for job entry, but also for continued learning and job advancement. They must also have acquired personal skills and attitudes in order to deal with life in a cosmopolitan, multilingual society as independent but cooperating citizens. Interpersonal, recreation, and leisure skills will grow in importance. In such an environment, education must be more than merely a way to "get ahead." In a society where some job sharing and unemployment may be a permanent feature, it is especially important that people discover the job of learning itself.

Miguel, 1985

Miguel reports on the answers given to questions raised by vocational education personnel from State agencies by experts in the field. On the question: What do current educational and labor market trends suggest for the future of vocational education? responses included:

Etzioni:	Most futuristic studies should be taken with the biggest grain of salt. The recent prediction that everyone will be involved in high tech is misleading. Our studies show the transition to high tech will be slow. For example, in the state of Massachusetts, only 9 percent of the jobs are high tech jobs. Therefore, the more futuristic the study, the more cautions that should be used in considering it.
Taylor:	The term that I heard recently is "broad tech." Broad tech suggests that many of the ongoing occupations will have to assimilate technology. We use laser beams in everything from leveling land to highly delicate operations by medicine. The key is that many of the ongoing occupations are going to upgrade to assimilate the new technology, and people will have to grow and adapt in those areas. But most of the jobs in the future are going to be in the same areas that they are today.
Rosen:	We shouldn't lose our perspective about high tech. The Department of Labor has done some projections on employment opportunities. In the next decade, there will probably be more jobs for secretaries than there will be for high-tech workers. In short, the existing jobs are going to offer the greater job opportunities.
Silberman:	One of the demographic projections is that we're going to have fewer young people entering the work force relative to the total population. We are going to

> see a much greater premium placed by industry and business on attracting high school graduates into the labor force. If that happens, I believe there will be a resurgence in high school vocational education.

To the question: How does the panel view the relationship between the role of secondary and post secondary (VE) programs? Dr. Taylor of the National Center for Research responded: "I think the ideal relationship would be uninterrupted and continual progress based on a convergence of interests on the part of the student and the specialization." (Referring to some of the concepts of the 2 + 2 programs): "If you have employer validated performance requirements, if you have competency based instructional programs, and if you can accommodate individualization, then the articulation from secondary to post secondary with increased specialization ought to be greatly facilitated."

Starr, 1986

In his report on a data-based approach to vocational education evaluation, Dr. Starr cites the purpose of the study as "describing a program planning and evaluation method for increasing the relevance of vocational education offerings in meeting employment needs of students, employers, and labor market areas." This approach used both quantitative data and explicit value judgments for comparing and ranking ongoing programs or candidate occupations. The paper describes an information and data selection framework, a scoring process and a ranking process for persons doing data-based planning and evaluation. Five components are used as an organizing scheme or framework for selecting data. These are: employment context, vocational education process, outputs, outcomes, and benefits.

One example from his paper. For the Purpose (Evaluation), he identifies a Component (Employment Context), and Information Category (Job Opportunities) and develops a Performance Indicator (The extent to which current demand for new workers in this occupation is greater than the supply). Then a rating of from 1 to 3 is given to this indicator. For example: it gets a 1 if the number of job openings is less than the number of completers of this program in the past year; it gets a 3 if the average annual number of job openings is greater than the number of completers from all programs of this kind in this labor market area.

Kadamus & Daggett, 1986

In their paper on new directions for secondary vocational education, the authors refer to the difficult choices facing vocational education today. They predict that those systems which simply update, modify, and expand existing programs may find themselves "at a dead end by 1990" and advocate a major reconstruction of secondary VE programs. They specify six major changes:

1. a decrease in emphasis on specialized training, which has been the cornerstone of vocational education, and a move toward a balanced program that develops broad, transferable skills as well as job specific skills;
2. a shift from large expenditures on specialized equipment to expenditures for staff development and for equipment that helps students develop conceptual understandings with broad applications;
3. a change in program emphasis from trade and industrial areas to information and service related occupations
4. new linkages with business and industry;
5. a major education program directed at the general public to promote awareness of vocational education opportunities; and
6. a closer relationship with general (academic) education in order to ensure a coordinated curriculum across all subject areas.

Clodi & Jacobson, 1989

This article is a summary of a series of conferences on trends and implications for educational and private business leaders, sponsored by AASA and the Allstate Insurance Company. The authors discuss past and future trends in order to help educators look for ways to meet the challenge of these changes in our society through developing an understanding of what they mean.

They first summarize the various decades in the United States from the 50's through the 80's ending the summary with:

> Now, the U.S. faces increasing world pressure on the industrial, economic, and political fronts. A longing to return to the basics and the tranquil lifestyles of the 1950s has surfaced. Some movement is occurring away from equality of entitlement for all as we examine which of our traditional values will be maintained.

They provide a "snapshot" of the 90's:

- The population will grow 1 percent per year.
- The baby boomers will be age 40 or older.
- People over age 85 will outnumber teens.
- The median age of the entire population will climb.
- Life expectancy in the year 2000 will be 77.
- Minority populations will increase rapidly with Hispanics becoming the biggest group.
- The population will shift to the South and Southwest.

The article concludes with educational implications and what the authors call the "bottom line" for educational institutions as follows.

Implications

- Vocational needs will change.
- Special problems will arise for rural and adult education.
- The home economics curricula will refocus to include child care, total health care, and nutrition.
- Programs will be needed to help students adjust to single-parent and latchkey homes.
- The role of senior citizens as both consumers and resources will need redefining.

- The need for programs for at-risk students and early childhood education programs will increase.
- Programs to increase funding for the arts and cultural education will have to be found.
- Aggressive competition with alternative and parochial schools will occur.
- A large decrease in the people believing they are middle class will occur (the belief may not be true).

The Bottom Line

Education must project its needs beyond that of just more funding. It must:

- identify its competition in the marketplace,
- identify and enlist potential allies,
- exploit its successes,
- increase the use of technology beyond that of managerial and resource functions,
- analyze demographics of the nation and local areas to adapt to changing needs,
- stop sending good money after bad,
- stop resisting all forms of change or reform,
- understand the values of constituents and integrate them into the decision-making process, and
- adopt strategic planning as one way to succeed in the future.

Now is the time to renew the qualities of American competitiveness to ensure our leadership role in the international marketplace.

The business community stands ready to assist us in this shared agenda. The educational community is responsible for initiating dialogue.

Characteristics Recommended by Recognized Authorities

Frantz, 1975

In his article for **Theory Into Practice**, Nevin Frantz, Jr. has looked at three approaches to setting up programs and curricula in terms of single occupation, Occupational Clusters and Multioccupational training thrusts. He recommends a shift in program construction toward a multioccupational approach in order that students acquire job entry competencies for a wide range of occupations. This goal of preparation for a wide range of jobs must then be evaluated to see if such student competencies are being developed. It fits under the rubric of individualization of instruction.

McCaslin & Lave, 1976

In this paper on needs assessment and career education, the authors review various procedures to be used in establishing and prioritizing goals for an educational system. "While most states may focus on different variables, it is anticipated that most states will be concerned with the assessment of state level objectives . . . this section will discuss tasks involved in that process."

They identify five major tasks in the process as follows.

1. Develop/revise/select state level objectives (learner outcomes) to be addressed
2. Develop/select instrumentation to assess desired achievement (importance) of state level objectives and actual achievement of objectives
3. Develop sampling strategies
4. Select method(s) to be used in identifying needs (determine difference/discrepancy between actual and desired achievement levels)
5. Identify priorities

Stevenson, 1979

In this paper the author proposes that evaluation activities need to be in place to address eleven problem areas. He identifies these as follows.

- To expand representation in evaluation
- To increase the effectiveness of the supervisory (subject matter specialist's review)
- To follow through on evaluation recommendations
- To assure communication of evaluation findings and results
- To assure communication and cooperation between evaluation and planning and between evaluation and the management information system (MIS)
- To evaluate services and programs for special populations
- To provide evaluation services when only limited resources are available
- To evaluate the state vocational delivery system
- To systematize all evaluation efforts
- To acquire employer follow-up data
- To assure continuing cooperation of employers
- To assure the confidentiality of employer follow-up
- To increase the effective use of evaluation information
- To analyze and package data for use by the local school or program
- To use evaluation information

Stephens, 1980

The author suggests that the following activities should occur and that they should be conducted by State Advisory Councils.

1. Prepare to conduct an audit
2. Conduct the audit

3. Report results

4. Reconcile the audit

Under reconciliation she recommends that the Council should evaluate the evaluation and come to joint agreement with the LEA personnel who have been audited on a plan of action. Once the plan of action is implemented, the LEA submits a review of the corrective action and the Council conducts a follow-up visit focusing on that review.

Silberman, 1983

Silberman recommends the application of education and training to performance in applied settings. His recommendations include four levels which can be addressed as one component of an evaluation system. These follow. 1) Did the training occur in an actual applied setting (like on-the-job)?; 2) Was there a simulated applied setting that included technical facilities, realistic social relations, and performance standards?; 3) Did the training emphasize an understanding of the principles that operate in the real world setting?; or 4) Did the training emphasize transforming applied problems into a set of problems that match symbolic skills that students possess (paper and pencil activities, translation of product development problems into accounting problems for resolution, and so on).

National Commission, 1984

This report identifies some challenges to vocational education that could be addressed through an evaluation of both process and outcomes. These have been transposed into questions as listed below.

1. Is there consensus as to the current perceptions of vocational education?
2. Is there access to programs?
3. Is there program equity?

4. What curricula are being used?

5. What teacher education practices are being implemented and what outcomes attained?

6. Are there published standards and measures of accountability?

7. Is there articulation between secondary and post secondary?

8. Are there criteria for leadership established for administrators at all levels?

9. Is there evidence of business, labor, and community involvement?

10. Is there evidence of field-based learning, including cooperative education?

Farley, McKinney, Kohan, Smith, & Pratzner, 1985

In reviewing the job-task analysis approach to curriculum development for vocational education, the authors define its two parts. Job analysis is "the collection and interpretation of information about the work performed" and task analysis is "the identification of the kinds of performance capabilities demanded by the task." They discuss the criticisms of this approach and conclude with a listing of its advantages over other more traditional approaches.

1. Can be used to fit both "training" and educational treatments

2. Can be used to organize the curriculum construction process into discrete and functional components

3. The end products of this approach are generalizable to a large number of diverse contexts and learning situations

4. Has a high probability of ensuring that students are in fact being trained in those skills needed by business and industry

5. Allows individuals to proceed through a learning sequence at their own pace and thus is cost effective

6. Allows for the individual development and evaluation of each discrete competency

7. Requires actual performance as evidence of the competency attainment

8. Allows students to progress at their own rate by demonstrating attainment of the specified competencies.

Since these are its purposes or goals, an evaluation system could address a series of questions based on each. For example, is the curriculum organized into discrete and functional components? At a broader level a state could look for evidence that a job-task analysis approach is being used in the development of course curricula.

McCaslin, 1985

In this article from **The Agricultural Education Magazine**, Dr. McCaslin advocates the use of effective schools characteristics in the evaluation of vocational education programs. He cites the thirteen separate characteristics identified by Purkey and Smith in a 1982 study as:

1. School site management
2. Leadership
3. Staff stability
4. Curriculum articulation and organization
5. Staff development
6. Parental involvement and support
7. Schoolwide recognition of academic success
8. Maximized learning time
9. District support
10. Collaborative planning and collegial relationship
11. Sense of community
12. Commonly shared, clear goals and high expectations
13. Order and discipline

He describes each of the characteristics and offers them as suggestions for improving and strengthening future evaluation efforts.

In conclusion the author states "Evaluation has been an essential part of vocational agriculture for many years. Additionally, teachers have sought input from a number of sources. However, the evaluation criteria often fail to include examination of key educational characteristics. The use of effective schools characteristics in evaluation should result in more meaningful information for improving programs."

Characteristics of State Evaluation Plans Required by Legislation

National Center, 1984

The Carl D. Perkins Vocational Act of 1984, P.L. 98-525, emphasizes the need for program improvement efforts and requires an evaluation of at least 20 percent of all programs annually, over a five-year period. The legislation requires evaluation on both a process and product basis and assessment is to address the following.

- The pertinence of programs to the workplace and to new and emerging technologies
- The responsiveness of programs to the current and projected occupational needs in the state
- The capacity of programs to facilitate entry into, and participation in, vocational education and to ease the school-to-work and secondary-to-postsecondary transition
- The technological and educational quality of vocational curricula, equipment, and instructional materials to enable vocational students and instructors to meet the challenges of increased technological demands of the workplace
- The capability of vocational education programs to meet the needs for general occupational skills and improvement of academic foundations in order to address the changing content of jobs.

It further stipulates that states will develop measures for the effectiveness of programs in meeting the needs identified in state plans.

Professional Association Recommendations for Reauthorization of the Perkins Legislation

The following associations have recently published and distributed position papers to provide Congress with a summary of professional views concerning the reauthorization of the Perkins Act of 1984.

American Association of Community and Junior Colleges
American Association of School Administrators
American Vocational Association
Association of Community College Trustees
Council of Chief State School Officers
National Alliance of Business
National Association of State Councils on Vocational Education
National Association of State Directors of Vocational Education
National Governors' Association
U.S. Department of Labor/American Society of Training and Development

These position papers provide some useful information about the direction vocational educators and other leadership groups would like the Federal government to take toward improving vocational education. AASA has summarized the recommendations, noting that some groups are still in the preliminary stages of developing reauthorization positions and the summary is not complete.

Some common positions which are of interest to secondary programs were selected for inclusion here: 1) establishing a set-aside for language minority populations, 2) defining disadvantaged as those students with greatest need, 3) earmarking funds for two plus two programs, 4) mandating that local councils must have a majority of members from the private sector, 5) increasing parental involvement, and 6) linking accountability to program quality and community development.

APPENDIX G

Recommended Secondary Vocational Education Program Criteria

Program Resources

1. Philosophy & Goals

   Is there a statement of philosophy and are there goal statements which express the principles and concepts adhered to by the local school system?

2. Learners

   Is information about the skills, abilities and interests of the learners being collected and continually updated?

   Is demographic information about the learner population being collected?

3. Staff

   Is information about the professional qualifications of instructional staff being collected and continually updated?

4. Curricula

   Is there an existing data base of available curricular options which address course goals and student assessment data?

5. Materials

   Are current instructional materials based on course goals and student assessment data? Is there an existing pool of optional and appropriate instructional materials?

6. Facilities

   Is current information available which relates facility space and utilization to program content?

7. Business & Community Resources

   Are data about local business, industry and community characteristics being collected and continually updated?

8. World-of-work/Labor Market Data

Is there current information available about the world-of-work context and specific employment needs within that context?

Are data available from environmental scanning to help project employment needs and from world-of-work leadership figures to help project desired employee characteristics?

9. Demographic Projections

Are data available on projected population shifts as they affect potential learner populations?

Are data available on higher education enrollment projections as they affect potential staff availability?

Are data available on projected changes in the local community?

10. Funding levels

Is there information available on anticipated changes in funding levels and/or legislative reauthorization recommendations?

11. Formative & summative Evaluation Results

Are the results of formative evaluations being used to guide program improvement? Are the results of summative evaluations for accountability and reporting also being used to plan and revise programs?

Program Processes

1. Planning

Are various audiences who will be impacted by change effectively involved in the program planning process? Are there effective linkages between the educational system and the community and between secondary and post secondary institutions?

Is the information obtained from an environmental scanning of the world-of-work and the broader community being used in the planning process?

Are there procedures in place for adapting programs and course content to meet identified student needs?

2. Organizational Arrangements

Is there a governance structure in place which promotes access and involvement at all levels and provides for program support?

Are there clearly stated roles, expectations, responsibilities and levels of authority for vocational education administrators? Is there evidence of continuity and commitment?

3. Student Assessment & Diagnosis

Are there established procedures for the assessment of student knowledge, skills and application of skills and for the diagnosis of student needs?

Are standardized occupational tests or job-task criterion referenced tests being administered?

Are follow-up data on continuing education and/or employment for leavers and completers being collected?

4. Staff Development

Are the professional qualifications and skills of instructional and administrative staff being matched to program structure, content and delivery to identify staff development needs? Are programs based on these identified needs being provided?

5. Curricula

Are program resources being used in the development of curricula? Are student assessment results being used to diagnose curriculum revision needs?

Is there evidence in the curricula of the integration of academic, general and vocational education course goals?

Are there established procedures to provide for curriculum articulation from grade to grade and across departments and institutions?

6. Programs

Dos the delivery of instruction provide for cooperative education opportunities for students?

Does program delivery allow for alternatives such as evening programs, exit options, applied settings and re-entry?

Do programs include vocational student organizations which facilitate leadership and career development?

7. Instruction

Are there instructional programs available which focus on career awareness, career orientation and career exploration?

Are there instructional programs available which focus on the teaching of specific occupational skills?

Do all programs emphasize safety in both the school setting and the applied setting?

8. Career Guidance & Recruitment

Are provisions being made to allow for access to programs for all learners and to allow for equity in program enrollment and career guidance?

Do career guidance services assist in image building for vocational programs and do they recruit from the total learner population including special needs groups?

9. Student Services

Are there procedures and staff in place to assist students in job placement while in school and after leaving school?

Are there vocational student organizations available to supplement the student's course work and to provide extension and expansion of learning activities focused on career development?

Are additional student services available which address identified needs of the population enrolled in programs? (One example would be day care centers for the children of secondary students enrolled in vocational education programs.)

Program Results

1. Student Knowledge & Skills

Is there evidence of attained levels of knowledge and skills, as measured by instructor developed tests, teacher observations, anecdotal records, activity logs, inventories, standardized tests or other district approved instruments, for the following?

personal awareness and development of interests, abilities and skills
creative thinking
critical thinking
problem solving as an individual
awareness of occupational opportunities
exploration of occupations in simulated or applied settings
on-the-job and in school safety rules and procedures
skills required to be an effective consumer
employability or job readiness such as resume writing or interview techniques
specific occupational skills

2. Student Application of Skills

Is there evidence of attained levels of the ability to apply knowledge and skills, as measured by district approved instruments, for the following?

interpersonal skills in working with peers, supervisors or supervisees
study skills
self discipline and self reliance as a student, organization member or employee
problem solving in a cooperative group setting in school or on-the-job
respect for the rights of others in the classroom or on-the-job
specific occupational skills in an applied setting

3. Access & Equity

Have annual course and program enrollment figures been categorized by identified special needs groups?

Have annual course and program enrollment figures been categorized by race, sex and other demographic characteristics?

4. Enrollment & Drop Out Rate

Do the enrollment figures for each fiscal year designate the number of program explorers, completers and leavers?

5. High School Completion

Do the enrollment figures for each fiscal year designate the number of students who completed high school?

6. Follow-up

Do the statistics for each fiscal year include the number of graduates who enrolled in post secondary institutions and/or were placed in full or part time employment? Is there evidence that job placement was related to training?

7. Satisfaction with Program

Is there evidence of levels of student satisfaction with the instructional program and other services?

Is there evidence of levels of employer satisfaction with program completers?

8. Cost Effectiveness

Is there evidence that funds for vocational education are being expended prudently and efficiently and that results are meeting or exceeding local, state and national standards within the parameters set by these governing bodies?

IN89RE01

RESEARCH REPORT NO. 2a

(SUPPLEMENTARY REPORT)

EVALUATION CRITERIA RECOMMENDED FOR THE ASSESSMENT OF VOCATIONAL AND TECHNICAL EDUCATION PROGRAMS AND SERVICES

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PURPOSE OF THE SUPPLEMENTAL STUDY

A report was submitted to Phi Delta Kappa International in April of 1989 which included a set of 28 criteria recommended for use by the State of Indiana in the assessment of their secondary vocational and technical education programs.

In order to extend the comprehensiveness and usefulness of report recommendations, The WMU Evaluation Center was asked to conduct an additional search of the literature and modify report recommendations to include the evaluation of vocational and technical education for higher education and employment and training programs.

The purpose of this supplemental study is to report the results of that search, produce a bibliography of citations from the literature, analyze the findings, and modify the original set of 28 criteria based on that analysis.

The distinction between the scope of this study and that of the April report is 1) the educational level(s) being addressed and 2) the providers of that education. In the long-range plan for the State of Indiana, educational levels were defined as secondary, postsecondary, and adult. This supplementary report focuses on postsecondary and adult levels, i.e. "adult programs and services . . . do not lead to either a high school diploma or a postsecondary degree . . ." In terms of program providers, as delineated in the long range plan, this report focuses on postsecondary institutions and such employment and training agencies as the State Department of Employment and Training Services, State Private Industry Councils, the State Department of Human Services and community-based organizations. (Education and Jobs, 1988)

This report refers to career education, vocational education, and occupational education programs. These have been defined in a paper by Kenneth Hoyt as follows:

Career Education	"all those activities and experiences through which one learns about work"

Vocational Education	"all those activities and experiences through which one learns about a primary work role"
Occupational Education	"all those activities and experiences through which one learns to work in the world of paid employment." (Hoyt, 1973)

These terms are used throughout the literature and are defined here for that reason. They should, however, be viewed in the context of the current trend to describe vocational-technical education as a continuum of skill development, with education and training being provided on the basis of learner needs, rather than as separate and distinct programmatic thrusts.

STUDY PROCEDURES

The design of the original study was presented in the Center's April report on page twelve. This supplemental study followed the same design and procedural steps of collection, organization, and content analysis. Details of these are described below.

Collection Procedures

Two computerized ERIC searches were conducted. The first used the descriptors: higher education, university/college, junior college, community college, and area vocational-technical institutions; evaluation criteria; vocational education evaluation; technical education evaluation. The second used the descriptors: employment and training programs, JTPA, economically disadvantaged youth and adults, older workers, summer youth employment and training, dislocated workers; vocational and technical education evaluation; and evaluation criteria. These searches yielded 60 citations from the years 1983-1989.

A search of the journals was conducted using the Current Index to Journals in Education. An additional hand search was conducted at The WMU Education Library and private collections of educational materials.

A total of 128 documents or abstractions of documents were collected. Of these, only 64 were found to contain information relevant to the study. They were used in the content analysis described below. The draft bibliography was reviewed for accuracy and comprehensiveness by the project consultant; the final version is included here as Appendix A.

Organization and Content Analysis Procedures

Collected information was transferred to file cards and organized under higher education and employment and training and then into subsets of program resources, program processes, and program results.

A content analysis was done comparing the collected data to the 28 secondary evaluation criteria. The results of this analysis produced the findings specified in the next section of the report. The findings were reviewed to identify any consensus from the literature which would:

1. validate the original 28 criteria as being useful for higher education and employment and training programs
2. necessitate the addition of one or more criteria to any of the subsets
3. require the modification of any of the original criteria.

The results of the analysis and review produced a modifications list which was included in the first draft of the recommendations section. This narrative and the list were then critiqued for accuracy, validity, and utility by the project consultant.

The revised list was then used to produce a modified set of recommended evaluation criteria which was reviewed and edited by the project consultant. The final product is included in the report as Appendix B.

STUDY FINDINGS

Introduction

Vocational-technical education (VTE) in the United States is supported by federal, state, and local funds and falls roughly into three categories: public and private secondary school programs, public and private higher education programs, and employment and training programs.

Federal monies for VTE are provided through the Perkins Act, the Job Training Partnership Act (JTPA), the student financial aid portion of the Higher Education Act, the Adult Education Act, the Rehabilitation Act, the Women's Educational Equity Act, the Family Support Act (Job Opportunities and Basic Skills Program), the McKinney Homeless Assistance Act, the Dropout Demonstration Act, veterans education benefits programs, and the military tuition assistance program.

As of 1982, approximately sixteen million students were enrolled in VTE programs in public institutions, forty percent at the postsecondary level. According to figures reported by the Council of Chief State School Officers, obtained from federal education statistics for 1986, public postsecondary schools included: 504 postsecondary area vocational schools; 720 community colleges; 162 technical institutions; 308 specialized schools for one occupational area; 185 four year institutions; and 70 skills centers providing programs for economically disadvantaged students. (Council of Chief State School Officers, 1988)

Supplemental to the programs run by the U.S. Department of Education are employment and training activities maintained by various branches of the federal government which are important to the vocational technical education system. Under the authority of the Secretary of Labor, the McKinney Act provides for remedial education, job search and community services, "or any activity described in section 204 of the JTPA." (Council of Chief State School Officers, 1988) The JTPA is the largest program of employment and training and is coordinated by the governor of each state. It is designed to prepare youth and unskilled adults for entry into the world of word. Other employment and training programs which are federally funded are listed in paragraph two above and, other than the U.S. Department of Defense programs, the military tuition assistance programs, and education benefits for veterans, they are all administered by the U.S. Department of Education.

A common theme found through the literature review which applies to higher education, employment and training programs, and secondary education programs is the recommendation for increased coordination of all VTE programs, the consolidation of authority for these programs, the need for comprehensive state strategic planning, and a greater emphasis on evaluation through clearly stated program criterion standards and monetary incentives for those programs meeting or exceeding those standards.

More specifically, some authorities have recommended a continuum of learning from secondary to postsecondary with a core set of employment related competencies for all training providers which have been jointly established by educators and business and industry. The overall goal for this consolidated effort would be "increases in the long term employability and productivity of American workers." (National Governor's Association, 1989)

Selected findings which relate specifically to the criteria to be used in the assessment of employment and training programs and higher education vocational-technical programs follow.

Criteria for the Assessment of Employment and Training Programs

Seven performance measures and associated standards were originally developed for the Job Training Partnership Act based on FY '82 CETA data. These were revised for the 1986 program year based on JTPA program results. The revised performance measures are as follows.

Adults	Entered employment rates Cost per entered employment Average wage at placement Entered employment rate for welfare recipients

Youth	Entered employment rate
	Positive termination rate
	Attained youth competencies

Youth competencies are not currently required to be reported to the Department of Labor, this may change with the reauthorization of JTPA. It has been recommended by the Washington Department of Employment Security, among others, that the youth competencies should be measured by local program personnel. The youth competencies are:

Awareness of the world of work
Basic education skills
Job education skills
Work maturity

The Washington State DES also recommends measuring the following:

The development of new skills
The rate of completion of training
Enrollment data
Recruitment activities
Identification of participant needs

Compiled criteria obtained from a review of extant employment and training programs and from the recommendations of associations, government agencies, foundations, and private industry councils are:

High demand occupations determining program offerings
Recruitment activities
Faculty expertise in working with diverse adult populations
Equipment and instructional materials
Use of advisory councils and program committees
Curriculum designed by workers from business and industry
Alternative delivery of programs
Basic skills remediation
Study skills
Basic education skills (reading, writing, mathematics)
Academic skills (especially speaking, listening)
Career and personal development
Problem solving
Creative thinking
Self-esteem
Job seeking, interviewing (pre-employment) skills

Interpersonal skills
Leadership skills
Organizational effectiveness
Job specific skills
Work maturity
Participant (student) organizations for the occupational discipline
Support services (transportation, child care, and social services)
Enrollment
Rate of program completion
Placement rate for leavers and completers
Salary
Employment retention rate
Cost per enrollee

Criteria for the Assessment of Higher Education Programs

A review of the literature on school based postsecondary programs produced the following compilation of criteria recommended for the measurement of program success. The list came from postsecondary state and local boards and agencies' reports; models, case studies, and recommendations from college and technical institution personnel; and from state and national consortiums, task forces, and associations, as well as from recognized authorities in the field of vocational education evaluation.

Personal characteristics of students
Student aspirations, attitudes
Family background of students
Learner goals
Student interests
Teacher skills, staff characteristics, instructor qualifications
Facilities and facility use
Equipment (including the use of high tech equipment)
Curriculum and the "classroom context"
Instructional materials
Educational resources (the library, instructional materials)
Community input
Labor market data, industry/business needs, relevance to available occupations
Program advisory committee input
Industry/education partnership; joint offerings with employers/community colleges
Planning using advisory committees, relevance to the community, relevance to the campus, staff involvement in setting outcomes
Secondary/postsecondary program articulation

Institutional flexibility
Administrative structure to support programs; role of administration
Organization and management
Professional development for faculty; staff development including needs and characteristics of handicapped and at risk students
Student assessment and diagnosis
Retraining needs of students
Curriculum content
Occupationally customized training
Lab activities (simulated world-of-work)
Courses for special populations
Alternative delivery of programs
Student organizations
Instruction
Career decision making, career assessment, career awareness and orientation
Career counseling and guidance
Program image (PR)
Recruitment of limited English speaking persons, displaced homemakers, dislocated workers, out of school youth and adults, minority students and adults with retraining needs
Day care
Job placement for students
Student performance
Knowledge building skills
Information gathering skills
Basic skills
Domain skills (cognitive, affective, psychomotor)
Academic skills
Employability skills, job seeking skills, interviewing skills
Critical thinking and decision making
Problem solving
Sense of efficacy
Independence
Interpersonal skills
Career awareness skills
Access into programs
Equity
Enrollment
Graduation, program completion
Drop out rate
Placement for completers and leavers
Continuing education
Student satisfaction
Employer satisfaction
Cost effectiveness, cost by contact hour and by enrollment
Operating costs
Consortium efforts among higher educational institutions within the state

Accreditation results
Societal outcomes (social stability)
Staff development for support staff
Academic skills to enter other educational programs
Exchange programs for vocational educators with business and industry employees

RECOMMENDATIONS

Introduction

The recommendations made on pages 30 and 31 of the April report apply as well to this supplemental study. It is critical that the recipients of this report recognize that the criteria being presented are provisional. The procedures which were outlined in the tactical plan on pages 34-39 were designed to allow all vocational-technical education program providers within the state to study and critique these criteria. The revisions resulting from implementing each of the five steps in the tactical plan will allow the various audiences to develop ownership of the criteria as the State of Indiana carries out its long-range strategic plan.

General Recommendations

The May 1989 literature review has produced some general recommendations for state planning all of which emphasize consolidation and increased cooperation among various agencies. Several associations recommended that higher education institutions should begin or increase training for adults in out-of-school settings with funding from the Perkins reauthorization legislation. In addition, they encouraged State Departments of Labor and Health and Human Services to use accredited higher education institutions to provide occupational and basic skills training for adults and needy youth.

In a recent speech, the Assistant Secretary of The U.S. Office of Vocational and Adult Education called on educators to recruit new learners from minorities, immigrants, limited English speaking citizens, and older adults.

In addition, some vocational education authorities recommended that the first priority for higher education vocational institutions should be to meet the needs of displaced workers through close cooperation with employers, vocational rehabilitation agencies, JTPA, private agencies, and other community based programs. Still others suggested that an appropriate role for higher education, under the Perkins legislation, is to provide customized training specifically designed for a particular local business or industry by contracting with the firm to design, develop, implement, and evaluate training based on job analyses.

The National Alliance of Business suggested that states use the JTPA State Job Coordinating Councils as a catalyst for "broad institutional reform" and follow the councils' lead by providing monetary incentives. (National Alliance, 1988)

The general trend of the various groups with a direct interest in vocational-technical education is toward integration, cooperation, and consolidation of effort in providing educational opportunities for the residents of a state. As stated in the findings, this would include a greater emphasis on evaluation and the adoption of a core set of employment competencies which would be used by all training providers within the state in the evaluation of programs.

Further analysis of the findings led to the development of a list of modifications to the original set of evaluation criteria and a revised table of those criteria. These are presented below. They were used in turn to produce a complete set of evaluation criteria being recommended for the assessment of secondary, higher education, and employment and training programs. The set of recommended criteria is attached as Appendix B.

Modifications of Criteria to Include Higher Education and Employment and Training Programs

Program Resources

1. Philosophy & Goals

   change "local school system" to "program providers"

2. Learners

   add "aspirations of learners"

6. Facilities

   add "scheduling of facilities"

10. Funding Levels

    add "funding incentives based on evaluation results"

11. Formative and Summative Evaluation Results

    add "accreditation visits"

Program Processes

1. Planning

   add "linkages between postsecondary programs"

3. Assessment & Diagnosis (changed from Student Assessment & Diagnosis)

   add "retraining needs"

4. Staff Development

   add "support staff"
   add "opportunities for exchange programs for staff"

5. Curriculum

   add "provisions for remedial instruction"
   add "community based programs"

7. Instruction

   add "programs to meet the needs of special populations"

8. Career Guidance & Recruitment

   add "at-risk youth, the handicapped, limited English proficiency persons, displaced homemakers, and dislocated workers"

9. Additional Services

   change "school" to "training program"
   add "transportation, family resource management, and other social services"

Program Results

1. Knowledge & Skills

    add "cognitive, affective, psychomotor"
    change "school district" to "program"
    change "in-school" to "in-training"

2. Application of Skills

    change "school district" to "program"
    change "school" to "training program"

5. Program Completion (changed from "High School Completion")

6. Follow-up

    change "postsecondary institutions" to "other training programs"
    add "job retention"
    add "advancement on the job"
    add "salary"

NOTE: The term student, which connotes in-school programs, will be eliminated throughout the set of criteria. The more generic terms, learner or trainee, will be substituted.

PDK VOCATIONAL AND TECHNICAL EDUCATION EVALUATION PROJECT

RECOMMENDED CRITERIA

Vocational-Technical Education Program Criteria

Program Resources

1. Philosophy & Goals
2. Learners
   - skills, abilities, interests
   - demographic information
3. Staff
4. Curricula
5. Materials
6. Facilities
7. Business & Community Resources
8. World-of-work/Labor Market Data
   - current
   - projected
9. Demographic Projections
   - potential learners (clients)
   - potential staff
   - community
10. Funding Levels
11. Formative & Summative Results

Program Processes

1. Planning
   - stakeholder involvement & linkages
   - environmental scanning
   - program adaptability
2. Organizational Arrangements
   - governance structure
   - LEA leadership & commitment
3. Assessment & Diagnosis
   - knowledge, skills, application of skills
   - occupational tests
   - follow-up data
4. Staff Development
5. Curricula
   - development
   - integration
   - articulation
6. Programs
   - cooperative education
   - alternative delivery systems
   - vocational organizations
7. Instruction
   - awareness, orientation, exploration
   - special programs
   - occupational skills
   - safety
   - access & equity
8. Career Guidance & Recruitment
   - access and equity
   - special needs populations
9. Additional Services
   - job placement: in training, post training
   - career development (VSO)
   - other

Program Results

1. Knowledge & Skills
   - personal awareness & development
   - creativity
   - critical thinking
   - problem solving (individual)
   - occupational awareness
   - career exploration
   - safety
   - consumer
   - employability
   - occupational
2. Application of Skills
   - interpersonal
   - study
   - academic
   - self discipline, self reliance
   - problem solving (as a group)
   - respect for rights of others
   - occupational
3. Access & Equity
   - special populations
   - non traditional learners
4. Enrollment & Drop Out Rate
5. Program Completion
6. Follow-up
   - continued education
   - employment
7. Satisfaction with Program
   - learners
   - employers
8. Cost Effectiveness

APPENDIX A

Bibliography

Action Plan for County Community College Presidents Association of New Jersey and the New Jersey Council of Community Colleges (1988). Community, Technical and Junior College Journal. 58 (5), 19.

American Vocational Association (1988). Summary of AVA Proposed Amendments to Reauthorize the Carl D. Perkins Vocational Education Act of 1984. Alexandria, VA: Author.

Armistead, L. Pendleton et al. (1987). Selected General Education Influence Affecting Degree Completion for Community College Occupational Students. Community College Review. 15 (3), 55-59.

Bray, Dorothy (1987). Assessment and Placement of Developmental and High-risk Students. New Directions for Community Colleges No. 57. San Francisco, CA: Jossey-Bass, Inc.

Budke, Wesley (1985). Summary of State-Administered Program Improvement Projects. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Bureau of Occupational Education Research (1983). Support Materials for the Evaluation of Occupational Education. Albany, NY: Author.

Burns, F. Nelson, & Llamas, Frank (1988). Getting Off Welfare. Vocational Education Journal, 63 (1), 31-32.

Campbell, Dale F., & Wood, Mary T. (1987). General Education in the Occupational Curriculum: Why? To What Extent? With What Results? New Directions for Community Colleges No. 58. San Francisco, CA: Jossey-Bass, Inc.

Campbell, Paul B., & Panzano, Phyllis (1985). Toward Excellence in Secondary Vocational Education: Elements of Program Quality. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

The Carnegie Council on Policy Studies in Higher Education (1980). Three Thousand Futures: The Next Twenty Years for Higher Education. San Francisco, CA: Jossey-Bass, Inc.

Carpenter, C. Blaine, & Dorg, James C. (1988). Assessing Critical Thinking Across the Curriculum. New Directions for Teaching and Learning No. 34. San Francisco, CA: Jossey-Bass, Inc.

Charner, Ivan, & Rolzinski, Catherine (eds.) (1987). Responding to the Educational Needs of Today's Workplace. New Directions for Continuing Education No. 33. San Francisco, CA: Jossey-Bass, Inc.

Corwin, Luene (1986). Evaluating and Revising Programs: A Forum of the National Postsecondary Alliance. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Council of Chief State School Officers (1988). Recommendations for a Vocational Technical Education Act. Washington, DC: Author.

Dubravcic, Elizabeth V. et al. (1986). Evaluating Short-Term Skill Training. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Eaton, Judith S., Hawk, Thomas R., Hirsch, Samuel, & Terzian, Aram (1988). An Academic Model for Urban Community College Education. Community, Technical and Junior College Journal, 58 (5), 41-43.

Edington, Everett D., & Cruikshank, K. (1979). Synthesis of Evaluation Programs in Vocational Education at the National Level and in Wisconsin. Madison, WI: The Vocational Studies Center, University of Wisconsin-Madison.

Education and Jobs for Indiana's Future: A Long-range Plan for a Comprehensive Vocational Education Program in Indiana (1988). Indianapolis, IN: Indiana Commission on Vocational and Technical Education.

Education for Employment: A Vision of the Future (1988). Springfield, IL: Illinois State Board of Education, Adult, Vocational and Technical Education.

Fadale, LaVerna et al. (1984). Assessment of Effectiveness of Developmental Programs in Postsecondary Occupational Education: Phase II. Albany, NY: New York Education Department.

Fadale, LaVerna (1983). Assessment of Effectiveness: Postsecondary Occupational Education. Albany, NY: State University of New York.

Fadale, LaVerna, & Winter, Gene (1987). Evaluating Developmental Studies Programs in Two-Year Colleges: A Consensus Approach. Albany, NY: New York Education Department.

Ferrin, Richard I., & Arbeiter, Soloman (1975). Bridging the Gap: A Selection of Education-to-work Linkages. New York, NY: College Entrance Examination Board.

Florida Division of Vocational, Adult and Community Education (1988). Progress Report of the Standing Committee on Vocational Program Review. Tallahassee, FL: Author.

Franchak, Stephen, Franken, Marion, & Subisak, J. (1980). Specifications for Longitudinal Studies. The National Center for Research and Vocational Education, The Ohio State University.

Franchak, Stephen, & Weiskott, Janet (1978). Evaluation Handbook: Guidelines and Practices for Follow-up Studies. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Green, Charles S. III, & Salem, Richard G. (1988). Assessing the Prospects for Liberal Learning and Careers. New Directions for Teaching and Learning, San Francisco, CA: Jossey-Bass, Inc.

Grembowski, David (1986). JTPA Evaluation at the State and Local Level. Volume III: A Guide for Process Evaluations. Olympia, WA: Department of Employment Security.

Guiton, Bonnie (1989). Expanded Scope of Vocational Education Skills for the Future. Leadership News, 42, 14.

Gysbers, Norman C. (1988). Major Trends in Career Development Theory and Practice: Implications for Industrial Education. Journal of Industrial Teacher Education, 25 (4), 5-14.

Halpern, Diane F. (1987). Recommendations and Caveats. New Directions for Higher Education No. 59. San Francisco, CA: Jossey-Bass, Inc.

Hoyt, Kenneth (1973). Career Education, Vocational Education and Occupational Education: An Approach to Defining Differences. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Huber, Vandra L., & Gay, Geri (1984). Uses of Educational Technology for Formative Evaluation. New Directions for Continuing Education No. 24. San Francisco, CA: Jossey-Bass, Inc.

Hunting, Gordon (1986). Evaluating Vocational Training Programs. Washington, DC: World Bank.

Kaplan, Dorothy J. (1984). Components of Successful Training Programs. New Directions for Community Colleges No. 48. San Francisco, CA: Jossey-Bass, Inc.

Long, James P. (1987). Evaluating Occupational Programs. Community College Review, 14 (3), 48-50.

Martinez, Ted Jr., & Echord, Barbara (1987). Occupational Program Evaluation. New Directions for Community Colleges, No. 58. San Francisco, CA:

McGhee, M.B. et al. (1986). Toward a Programmatic Research Scheme for Product Evaluation of Vocational Education in Agriculture. Gainesville, FL: Institute of Food and Agriculture Sciences.

McTyre, Jean (1984). Program Evaluation Guide: Academic Affairs Report No. 84. Los Angeles, CA: Los Angeles Trade-Technical College.

Mertens, Donna, McElwain, Douglas, Garcia, Gonzalo, & Whitmore, Mark (1980). The Effects of Participating in Vocational Education: Summary of Studies. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Michigan State Board of Education (1988). Michigan State Plan for Vocational Education 1988-89/1989-90. Lansing, MI: Author.

Moss, Jerome, Jr. (1988). Vocational Education and Customized Training. Journal of Industrial Teacher Education, 25 (3), 19-28.

National Alliance of Business (1988). Shaping Tomorrow's Workforce. Washington, DC: Author.

National Association of Counties (1986). Beyond the Model: An Approach to Negotiating JTPA Performance Standards. Washington, DC: Author.

National Association of State Councils on Vocational Education (1988). Position Paper on Reorganization (unpublished). Albany, NY: Committee on Policy Assessment.

National Association of State Directors of Vocational Education (1989). Vocational Technical Education: Meeting Growing Needs. Washington, DC: Author.

National Governor's Association (1989). Draft Policy Statement on Vocational Education. Washington, DC: Author.

North Central Association of Colleges and Schools (1988). A Collection of Papers on Self-Study and Institutional Improvement. Chicago, IL: Author.

North Dakota State Board for Vocational Education (1988). State Plan for Vocational Education in North Dakota, FY 1989-90. Bismarck, ND: Author.

Ohio Council on Vocational Education (1988). Opportunities Unlimited: Vocational-Technical Education in Ohio. Westerville, OH: Author.

Oregon Department of Education (1988). Oregon State Plan for the Administration of Vocational Education, 1989 and 1990. Salem, OR: Author.

Patterson, Jonette (1988). Executive Summary of Workplace Basics: The Skills Employers Want (unpublished). State of Ohio Department of Education.

Peterson, Clifford S. (1989). Integrating the Humanities into Associate Degree Occupational Programs. Community, Technical and Junior College Journal, 59 (4), 37-44.

Piland, William & Kennedy, Larry (1988). Vocational Education Accountability Reports. Community/Junior College Quarterly of Research and Practice, 12 (1), 27-36.

Pratzner, Frank C. (1988). The Practical Application and Meaningful Integration of Skills. Journal of Industrial Teacher Education, 25 (2), 81-83.

Pratzner, Frank C., & Russell, Jill F. (1984). Perspectives on the Roles and Functions of Vocational Education. Perspectives on Vocational Education. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University.

Public Law 97-300-October 13, 1982 - 97th Congress: An Act to Provide for a Job Training Program. Washington, DC: U.S. Government Printing Office.

Public Law 98-524-October 19, 1984 - 98th Congress: An Act to Amend the Vocational Education Act of 1963. Washington, DC: U.S. Government Printing Office.

Shestakofsky, Stephen (1987). The Massachusetts Supported Work Program: The First Four Years. Remedial and Special Education, 8 (1), 31-35.

Spenner, Kenneth I. (1985). The Upgrading and Downgrading of Occupations: Issues, Evidence and Implications for Education. Review of Educational Research, 55 (2), 125-154.

Tindall, Lloyd W. et al. (1984). JTPA Youth Competencies and Handicapped Youth. Madison, WI: Vocational Studies Center, Wisconsin University.

Towns, Kathryn (1980). Guidelines for Establishing Programs and Services for Displaced Homemakers. Washington, DC: U.S. Department of Health, Education and Welfare, National Institute of Education.

Trapnell, Gail (1985). Evaluation, Planning and Budgeting Model. Atlanta, GA: Georgia State Board of Postsecondary Vocational Education.

Vaughan, George B., & Templin, Robert, Jr. (1989). Value Added: Measurement of Community College Effectiveness. Community Technical and Junior College Journal, 59 (5), 38-45.

APPENDIX B

Recommended Vocational-Technical Education Program Criteria

Program Resources

1. Philosophy & Goals

   Is there a statement of philosophy and are there goal statements which express the principles and concepts adhered to by program providers?

2. Learners

   Is information about the skills, abilities, aspirations, and interests of the learners being collected and continually updated?

   Is demographic information about the learner population being collected?

3. Staff

   Is information about the professional qualifications of instructional staff being collected and continually updated?

4. Curricula

   Is there an existing data base of available curricular options which address course goals and trainee assessment data?

5. Materials

   Are current instructional materials based on course goals and trainee assessment data? Is there an existing pool of optional and appropriate instructional materials?

6. Facilities

   Is current information available which relates facility space, scheduling, and utilization to program content?

7. Business & Community Resources

   Are data about local business, industry, and community characteristics being collected and continually updated?

8. World-of-work/Labor Market Data

Is there current information available about the world-of-work context and specific employment needs within that context?

Are data available from environmental scanning to help project employment needs and from world-of-work leadership figures to help project desired employee characteristics?

9. Demographic Projections

Are data available on projected population shifts as they affect potential learner populations?

Are data available on higher education enrollment projections as they affect potential staff availability?

Are data available on projected changes in the local community?

10. Funding levels

Is there information available on anticipated changes in funding levels and/or legislative reauthorization recommendations? Are there funding incentives based on evaluation results?

11. Formative & Summative Evaluation Results

Are the results of formative evaluations being used to guide program improvement? Are the results of accreditation visits, and summative evaluations for accountability and reporting also being used to plan and revise programs?

Program Processes

1. Planning

Are various audiences who will be impacted by change effectively involved in the program planning process? Are there effective linkages between the educational system and the community and between secondary and post secondary institutions? Are there effective linkages between postsecondary programs within the state?

Is the information obtained from an environmental scanning of the world-of-work and the broader community being used in the planning process?

Are there procedures in place for adapting programs and course content to meet identified learner needs?

2. Organizational Arrangements

Is there a governance structure in place which promotes access and involvement at all levels and provides for program support?

Are there clearly stated roles, expectations, responsibilities, and levels of authority for vocational education administrators? Is there evidence of continuity and commitment?

3. Assessment & Diagnosis

Are there established procedures for the assessment of learner knowledge, skills, and application of skills and for the diagnosis of learner needs, including retraining needs?

Are standardized occupational tests or job-task criterion referenced tests being administered?

Are follow-up data on continuing education and/or employment for leavers and completers being collected?

4. Staff Development

Are the professional qualifications and skills of instructional, administrative, and support staff being matched to program structure, content and delivery to identify staff development needs? Are programs based on these identified needs being provided?

Are there opportunities for exchange programs between business and industry employees and instructors?

5. Curricula

Are program resources being used in the development of curricula? Are trainee assessment results being used to diagnose curriculum revision needs?

Is there evidence in the curricula of provisions for remedial instruction?

Is there evidence in the curricula of the integration of academic, general, vocational, and occupational education course goals?

Are there established procedures to provide for curriculum articulation from grade to grade and across departments, institutions, and community based programs?

6. Programs

Does the delivery of instruction provide for cooperative education opportunities for learners?

Does program delivery allow for alternatives such as evening programs, exit options, applied settings, and re-entry?

Do programs include vocational organizations which facilitate leadership and career development?

7. Instruction

Are there instructional programs available which focus on career awareness, career orientation, and career exploration?

Are there instructional programs available to meet the needs of special populations?

Are there instructional programs available which focus on the teaching of specific occupational skills?

Do all programs emphasize safety in both the classroom setting and the applied setting?

8. Career Guidance & Recruitment

Are provisions being made to allow for access to programs for all learners and to allow for equity in program enrollment and career guidance?

Do career guidance services assist in image building for vocational programs and do they recruit from the total learner population including at-risk youth, the handicapped, limited English proficiency persons, displaced homemakers, and dislocated workers?

9. Additional Services

Are there procedures and staff in place to assist learners in job placement while in training and after leaving training?

Are there vocational organizations available to supplement course work and to provide extension and expansion of learning activities focused on career development?

Are additional services available which address identified needs of the population enrolled in programs (for example, day care; transportation; and access to family resource management, financial, legal, and psychological assistance)?

Program Results

1. Knowledge & Skills

Is there evidence of attained levels of knowledge and skills, as measured by instructor developed tests, teacher observations, anecdotal records, activity logs, inventories, standardized tests, or other program approved instruments, for the following?

personal awareness and development of interests, abilities, and skills (cognitive, affective, psychomotor)
creative thinking
critical thinking
problem solving as an individual
awareness of occupational opportunities
exploration of occupations in simulated or applied settings
on-the-job and in-training safety rules and procedures
skills required to be an effective consumer
employability or job readiness such as resume writing or interview techniques
specific occupational skills

2. Application of Skills

Is there evidence of attained levels of the ability to apply knowledge and skills, as measured by program approved instruments, for the following?

interpersonal skills in working with peers, supervisors, or supervisees
study skills
academic skills
self discipline and self reliance as a trainee, organization member, or employee
problem solving in a cooperative group setting in the training program or on-the-job
respect for the rights of others in the training program or on-the-job
specific occupational skills in an applied setting

3. Access & Equity

Have annual course and program enrollment figures been categorized by identified special needs groups?

Have annual course and program enrollment figures been categorized by race, sex, and other demographic characteristics?

4. Enrollment & Drop Out Rate

Do the enrollment figures for each fiscal year designate the number of program explorers, completers, and leavers?

5. Program Completion

Do the enrollment figures for each fiscal year designate the number of learners who completed the program?

6. Follow-up

Do the statistics for each fiscal year include the number of graduates who enrolled in other training programs and/or were placed in full or part time employment? Is there evidence that job placement, salary, job retention, and advancement were related to training?

7. Satisfaction with Program

Is there evidence of levels of trainee satisfaction with the instructional program and other services?

Is there evidence of levels of employer satisfaction with program completers?

8. Cost Effectiveness

Is there evidence that funds for vocational education are being expended prudently and efficiently and that results are meeting or exceeding local, state, and national standards within the parameters set by these governing bodies?

APPENDIX C

Project Personnel

Dr. Daniel L. Stufflebeam	Center Director
Ms. Mary E. Gourley	Principal Investigator
Dr. Floyd L. McKinney	Consultant

Project Activities and Timeline

Task	Completion Date
Develop search specifications	May 10
Format report contents	May 11
Conduct computer search	May 15
Conduct hand search	May 16
Evaluate and revise bibliography	May 18
Analyze findings and draft report	May 19
Develop criteria modifications	May 22
Validate findings and criteria modifications	May 23
Produce draft set of recommended criteria	May 24
Draft report recommendations	May 24
Validate criteria and report recommendations	May 26
Revise supplementary report	May 30
Deliver supplementary report	June 1